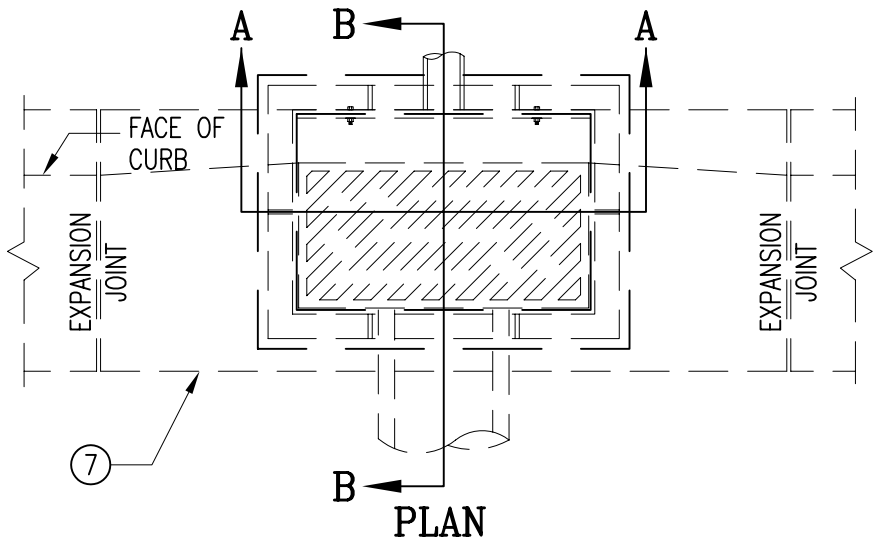
City of Rochester
Department of Public Works
Standard English Detail Plate Index

Plate No.	Rev.	Title	Date	Sheets
Sanitary & Storm Sewer Structures				
1-01	G	Structure Type 1	6/15/07	1
1-02	G	Structure Types 2, and 2A	6/15/07	1
1-03	H	Structure Types 3 and 3A	6/15/07	1
1-04	G	Structure Type 4 (XXin.)	6/15/07	2
1-05	B	Structure Type 5 (XXin.)	3/22/06	1
1-06	B	Structure Type 6 (Cleanout)	6/15/07	1
1-07	A	Manhole Waterproofing	3/22/06	1
1-08	B	Subsurface Drains	6/15/07	2
1-09	A	Decorah Edge Utility Detail	6/15/07	1
1-10	B	Curb Box Cover	6/15/07	1
1-11	G	Casting Schedule	3/22/06	1
1-12	C	Structure Adjusting Rings	3/22/06	3
1-13	B	Blind-Tie Field Connection for R.C.P. Storm Sewer	3/22/06	1
Curb & Gutter, Sidewalk, and Drive Approaches				
2-01	C	Concrete Curb & Gutter	3/22/06	1
2-02	D	Concrete Sill	3/22/06	1
2-03	D	Urban Type Curb and Sidewalk	3/22/06	1
2-04	A	Bituminous Curb	3/22/06	1
2-05	B	Transition Curb & Gutter Driveover to Type B or V	1/1/00	1
2-06	C	Curb & Gutter Reinforcement at Catch Basins	3/22/06	1
2-07	C	Concrete Drive Approach Type A	1/1/00	1
2-08	D	Concrete Drive Approach Type B	4/16/01	1
2-09	D	Concrete Drive Approach Type C	4/16/01	1
2-10	D	Concrete Drive Approach Type D	4/16/01	1
2-11	D	Concrete Drive Approach Type E	4/16/01	1
2-12	A	Rural At-Grade Intersection	3/22/06	2
2-13	H	Pedestrian Curb Ramp	3/22/06	2
2-14	D	Sidewalk Details	6/15/07	1
Typical Sections				
3-01	B	Typical Section Roadway	3/22/06	1
3-02	C	Typical Section Off-Road Bikeway	3/22/06	1
Utility Services				
4-01	E	Service Connections Stubbed into Boulevard	3/22/06	2
4-02	A	Standard 4in. Riser	3/22/06	1
4-03	B	Street Crossings for Utility Conduits	4/1/04	1
Pipe Insulation				
5-01	B	Concrete Insulation & Protection for Underground Pipe	1/1/00	1
5-02	D	Polystyrene Insulation	3/22/06	1

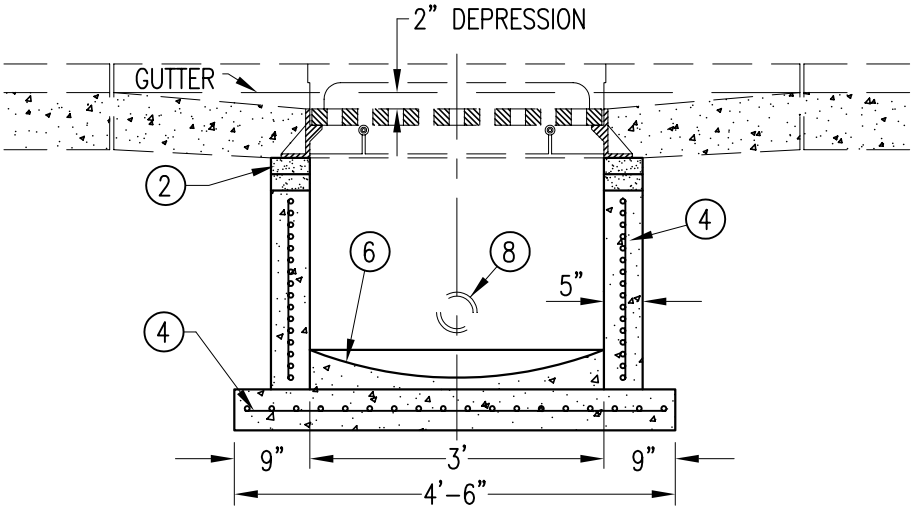
City of Rochester
Department of Public Works

Standard English Detail Plate Index

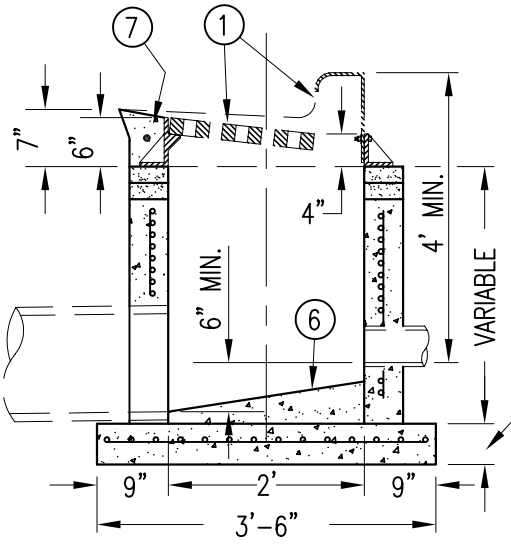
Plate No.	Rev.	Title	Date	Sheets
Watermain				
6-01	A	Valve Extension Stem	10/1/97	1
6-02	B	Valve Manhole	4/16/01	1
6-03	C	Pressure Reducing Valve Manhole	6/15/07	1
6-04	C	Hydrant Branch Detail	3/22/06	1
6-05	C	Restrained Joint Detail	6/15/07	1
6-06	A	Polyethylene Encasement	10/1/97	2
6-07	C	Alignment of Watermain at Sewer Manhole in Common Trench	8/15/02	1
6-08	B	Electrical Continuity	4/16/01	1
6-09	A	Installation Detail	10/1/97	1
6-10	A	Fire Hydrant Thread Pattern (4in. Nozzle)	10/1/97	1
6-11	D	Water Service and Meter Setting Details	3/22/06	2
6-12	C	Irrigation System	4/1/04	2
6-13	C	Alternate Service Layout for Multiple-Unit Buildings	6/15/07	1
6-14	B	Backflow Prevention for Water Tankers	4/1/04	1
6-15	A	Typical Fitting Cut-in and Removal Details	10/1/97	1
6-16	C	Bridge Crossing Pipe Hanger Details	4/1/04	1
6-17	A	Hydrant Protective Posts	10/1/97	1
Erosion Control				
7-01	B	Silt Fence Details	6/15/07	2
7-02	A	Flotation Silt Curtains	6/15/07	6
7-03	A	Temporary Sediment Control – Ditch Checks	6/15/07	6
7-04	A	Bale Barriers	6/15/07	1
7-05	A	Inlet Protection	6/15/07	5
7-06	D	Temporary Rock Construction Entrance	3/22/06	1
7-07	A	Turf Reinforcement Mat for Channel	4/16/01	1
7-08	A	Sediment Mat	6/15/07	1
7-09	A	Sediment Trap Detail	6/15/07	1



PLAN



SECTION A–A



SECTION B–B

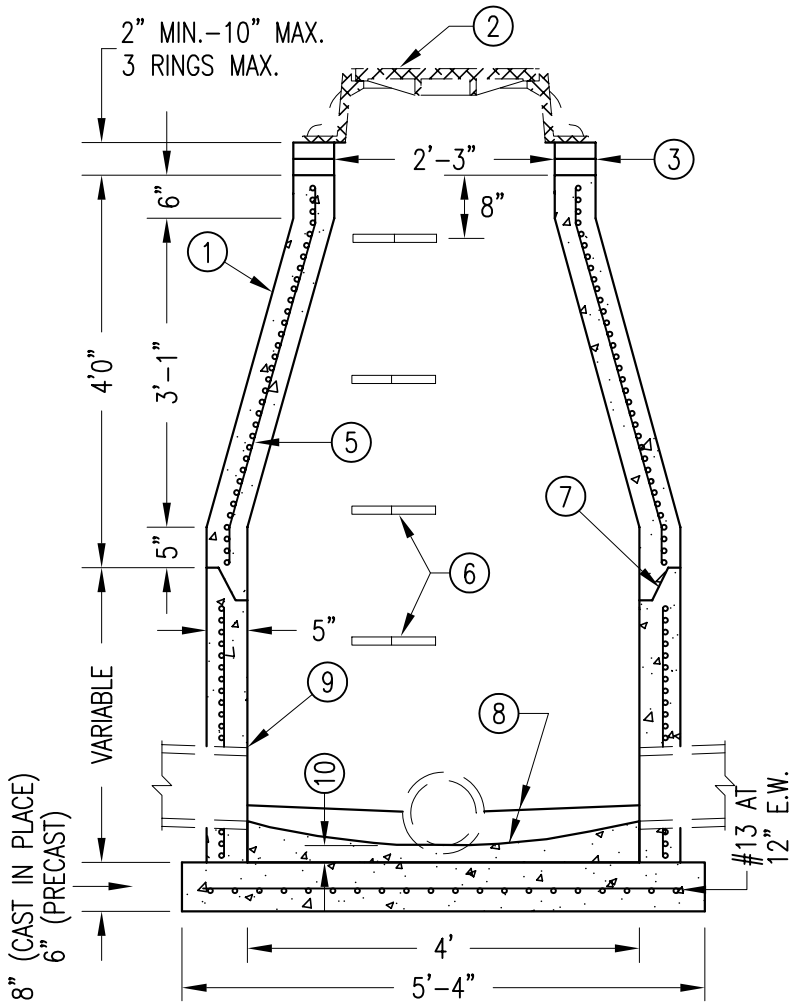
NOTES

1. REFER TO PLANS AND S.D.P. 1–11 FOR TYPE OF FRAME, GRATE AND CURB BOX.
2. ADJ. RINGS SHALL BE PER S.D.P. 1–12, AND BE FULLY MORTARED. HEIGHT OF RINGS SHALL BE 2" MIN.–10" MAX. WITH 3 RINGS MAXIMUM.
3. STRUCTURE SHALL BE PRECAST CONCRETE.
4. REINFORCING SHALL BE A MINIMUM OF SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT EACH DIRECTION.
5. NO STEPS REQUIRED.
6. PROVIDE CONCRETE FILLETS TO FIT BOTTOM PORTION OF STRUCTURE AND TO DIRECT THE FLOW TO OUTLET AT MIN. SLOPE OF 1/4" PER FOOT. MINIMUM CONCRETE THICKNESS AT OUTLET 1 1/2".
7. SEE S.D.P. 2–01, 2–05 AND 2–06 FOR CURB, GUTTER AND REINFORCEMENT DETAILS AT CATCH BASINS.
8. SEE S.D.P. 1–08 FOR SUBDRAIN DETAILS AT CATCH BASINS.

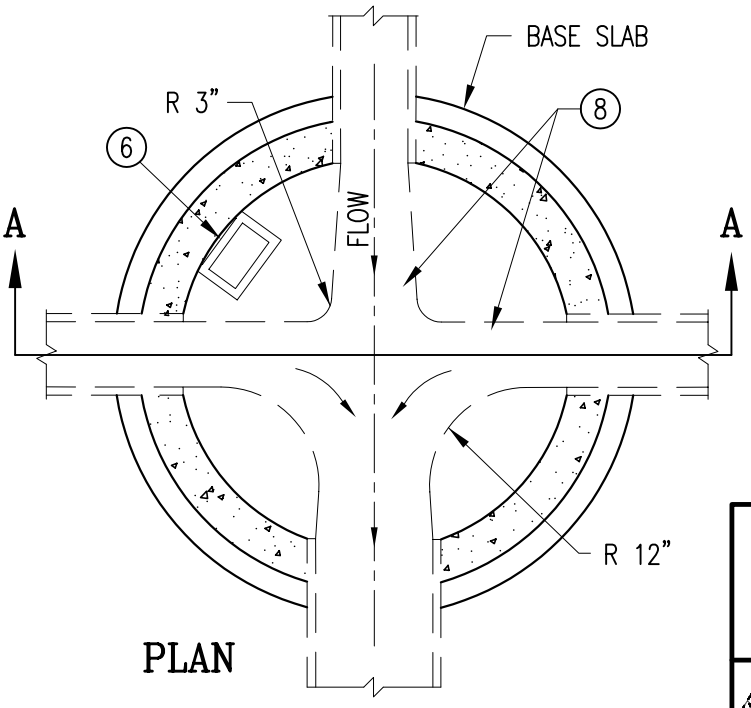
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STRUCTURE TYPE 1

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 1–01	REV. G	



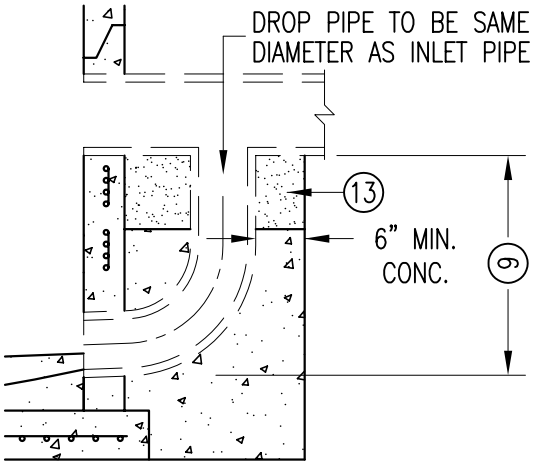
SECTION A–A



PLAN

NOTES

1. CONE SHALL BE CONCENTRIC.
2. REFER TO PLANS AND S.D.P. 1–11 FOR CASTING REQUIRED. CASTING SHALL BE BOLTED TO CONCRETE IN FIELD APPLICATIONS.
3. ADJ. RINGS SHALL BE PER S.D.P. 1–12, AND BE FULLY MORTARED.
4. STRUCTURE SHALL BE PRECAST CONCRETE.
5. REINF. SHALL BE A MIN. OF A SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN EACH DIRECTION.
6. STEPS ARE SPACED 16" O.C. MAX. AND SHALL CONFORM TO MN/DOT S.P. 4180 J. STEPS SHALL BE ORIENTED ON THE UPSTREAM LEFT SIDE AS SHOWN.
7. ALL JOINTS TO BE GASKETED. REFER TO MN/DOT SPEC. 3726.
8. PROVIDE CONCRETE FILLETS TO FIT BOTTOM PORTION OF PIPE TO DIRECT FLOW TO OUTLET AT 1/4" PER FT. MIN. SLOPE. SHAPE CHANNELS TO HAVE SMOOTH ROUND INVERTS. DEPTH OF CHANNELS SHALL NOT BE LESS THAN 1/2 THE PIPE SIZE.
9. DROP INLET USED FOR SAN. SEWER DROPS GREATER THAN 1.0 FT.
10. MINIMUM CONCRETE THICKNESS AT LOWEST INVERT SHALL BE 1 1/2".
11. STRUCTURE TYPE 3 OR 3A REQUIRED FOR NEW SANITARY SEWER CONSTRUCTION.
12. MAX. PIPE SIZE:
    24" FOR STRAIGHT THRU TO 135°
    18" FOR 90° BEND
13. DROP PIPE TO BE ENCASED IN GROUT IF FLEXIBLE PIPE, OR GRANULAR ENCASEMENT IF RIGID PIPE IS USED.



TYPE 2A FOR DROP–INLET

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STRUCTURE TYPES 2 AND 2A

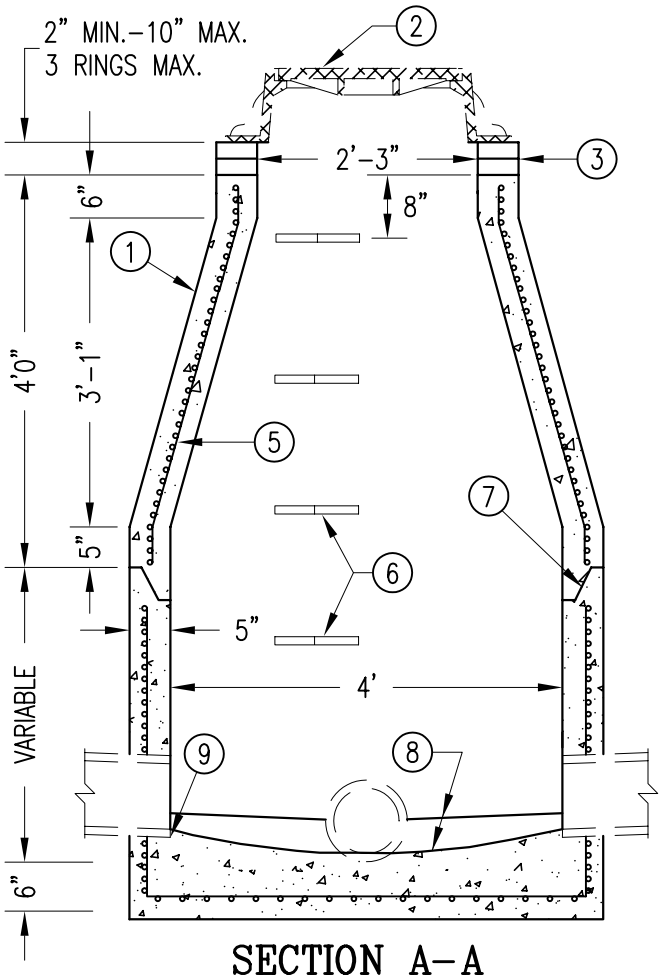
ASST. CITY ENGINEER

DIRECTOR

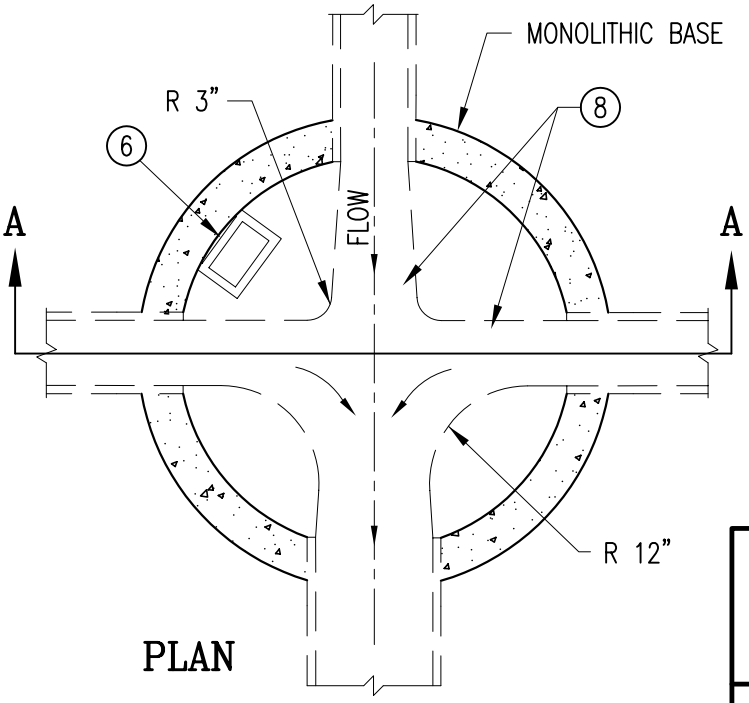
SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 1–02	REV. G

NOTES

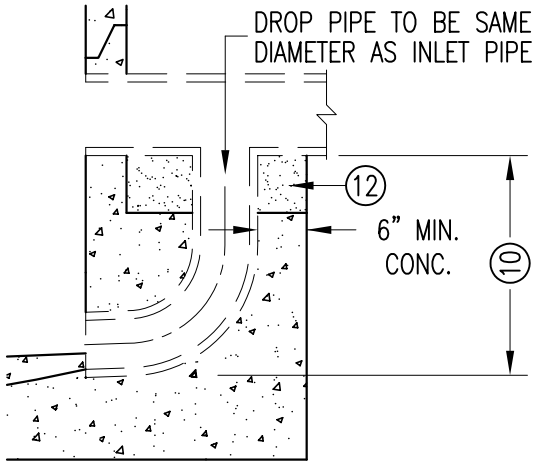
1. CONE SHALL BE CONCENTRIC.
2. REFER TO PLANS AND S.D.P. 1–11 FOR CASTING REQUIRED. CASTING SHALL BE BOLTED TO CONCRETE IN FIELD APPLICATIONS.
3. ADJ. RINGS SHALL BE PER S.D.P. 1–12, AND BE FULLY MORTARED.
4. STRUCTURE SHALL BE PRECAST CONCRETE.
5. REINF. SHALL BE A MIN. OF A SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN EACH DIRECTION.
6. STEPS ARE SPACED 16" O.C. MAX. AND SHALL CONFORM TO MN/DOT S.P. 4180 J. STEPS SHALL BE ORIENTED ON THE UPSTREAM LEFT SIDE AS SHOWN.
7. ALL JOINTS TO BE GASKETED. REFER TO MN/DOT SPEC. 3726.
8. PROVIDE CONCRETE FILLETS TO FIT BOTTOM PORTION OF PIPE TO DIRECT FLOW TO OUTLET AT 1/4" PER FT. MIN. SLOPE. SHAPE CHANNELS TO HAVE SMOOTH ROUND INVERTS. DEPTH OF CHANNELS SHALL NOT BE LESS THAN 1/2 THE PIPE SIZE.
9. FOR WATER TIGHT SEAL REFER TO MN/DOT S.P. 4007 C.
10. DROP INLET USED FOR SAN. SEWER DROPS GREATER THAN 1.0 FT.
11. MAX. PIPE SIZE:
    24" FOR STRAIGHT THRU TO 135°
    18" FOR 90° BEND
12. DROP PIPE TO BE ENCASED IN GROUT IF FLEXIBLE PIPE, OR GRANULAR ENCASEMENT IF RIGID PIPE IS USED.



SECTION A–A



PLAN



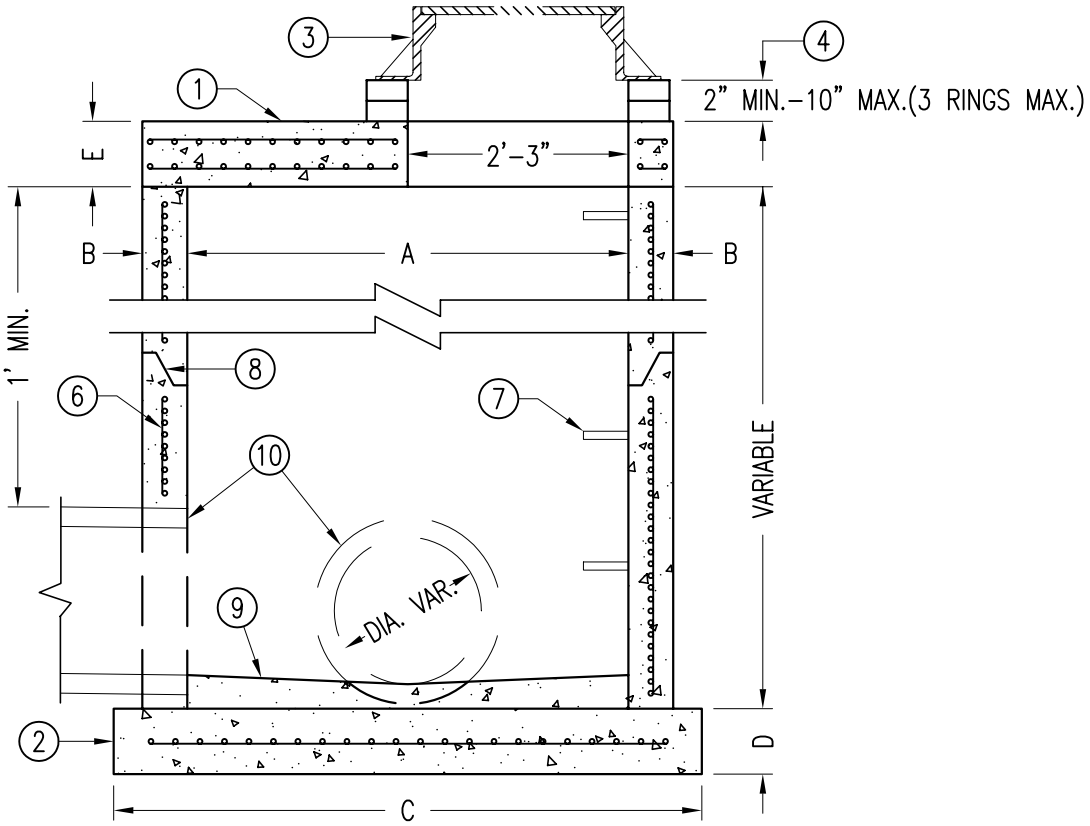
TYPE 3A FOR DROP–INLET

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STRUCTURE TYPES 3 AND 3A (SANITARY SEWER)

ASST. CITY ENGINEER	DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED	PLATE NO.	REV.
	6/15/07	1–03	H



NOTES

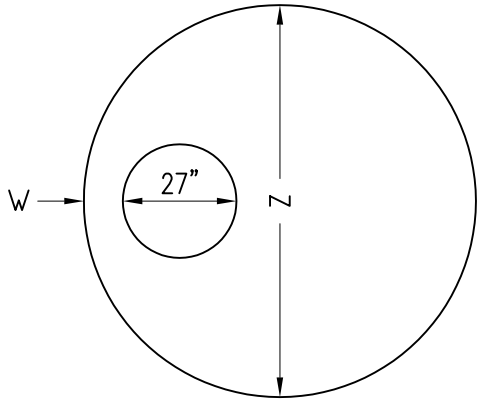
1. MANHOLE COVER SHALL CONFORM TO MN/DOT S.P. 4020 J.
2. MANHOLE BASE SHALL CONFORM TO MN/DOT S.P. 4011 E.
3. REFER TO PLANS AND S.D.P. 1–11 FOR CASTING REQUIRED. CASTING SHALL BE BOLTED TO CONCRETE IN FIELD APPLICATIONS.
4. ADJUSTING RINGS SHALL BE PER S.D.P. 1–12, AND BE FULLY MORTARED.
5. STRUCTURE SHALL BE PRECAST CONCRETE.
6. REINFORCING SHALL BE A MINIMUM OF A SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT IN EACH DIRECTION.
7. STEPS ARE SPACED AT 16" O.C. MAX. AND SHALL CONFORM TO MN/DOT S.P. 4180 J. STEPS SHALL BE ORIENTED ON THE UPSTREAM LEFT SIDE.
8. ALL JOINTS TO BE GASKETED. REFER TO MN/DOT SPEC. 3726.
9. PROVIDE CONCRETE FILLETS TO FIT BOTTOM PORTION OF PIPE TO DIRECT FLOW TO OUTLET AT 1/4" PER FT. MINIMUM SLOPE. MINIMUM CONCRETE THICKNESS AT LOWEST INVERT SHALL BE 1 1/2".
10. WATERTIGHT SEAL PER MN/DOT S.P. 4007 C. REQUIRED FOR SANITARY SEWER USE.

SEE SHEET 2 FOR MANHOLE DIMENSIONS

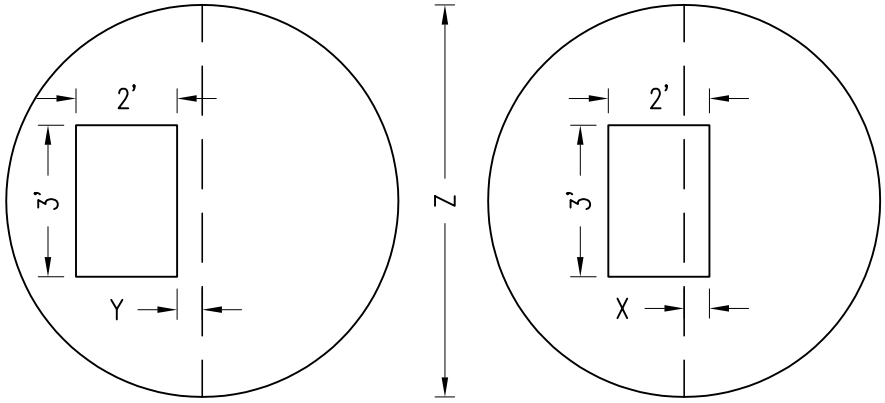
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STRUCTURE TYPE 4 (XX in.)

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 2 SHTS	DATE REVISED 6/15/07	PLATE NO. 1–04	REV. G	



MANHOLE TOP SLAB



ALTERNATE TOP
SLAB FOR MANHOLE

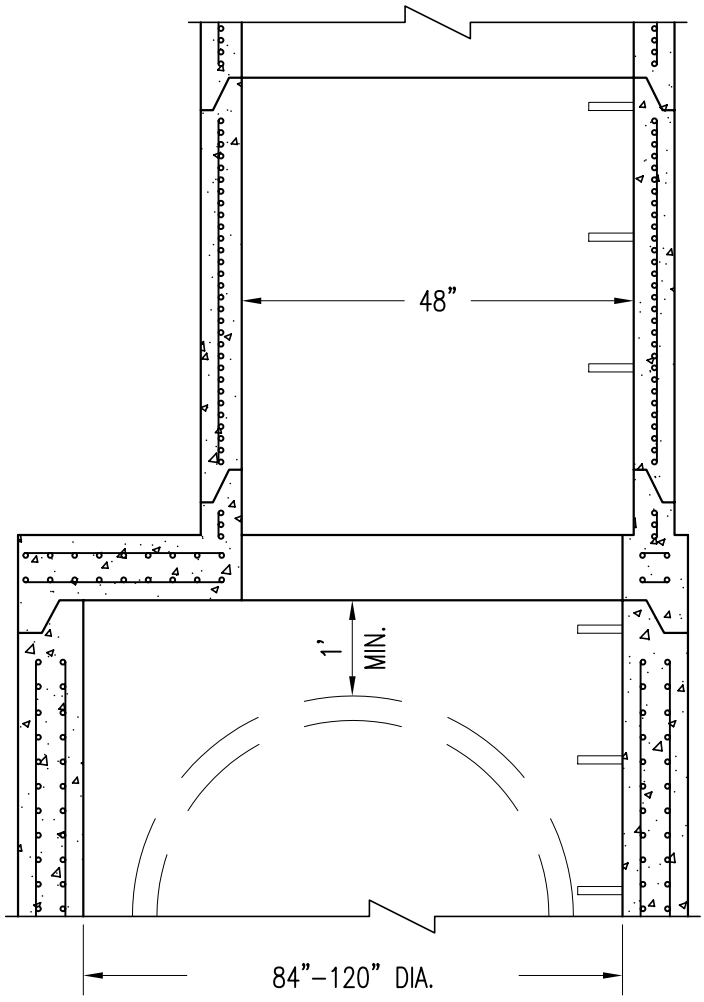
MH TOP SLAB				MANHOLE DIMENSIONS					MAX. PIPE SIZE	
W	X	Y	Z	A	B	C	D	E	135°–180°	90°
6"	9"	–	58"	48"	5"	64"	6"	6"	27"	18"
6"	6"	–	65"	54"	5.5"	72"	8"	8"	33"	21"
7"	3"	–	72"	60"	6"	78"	8"	8"	36"	24"
7"	0"	–	79"	66"	6.5"	85"	8"	8"	42"	30"
8"	–	3"	86"	72"	7"	92"	8"	8"	42"	33"
8"	–	6"	93"	78"	7.5"	100"	8"	8"	48"	36"
9"	–	9"	100"	84"	8"	106"	8"	8"	54"	42"
9"	–	12"	107"	90"	8.5"	114"	8"	8"	60"	42"
9"	–	15"	114"	96"	9"	120"	8"	8"	60"	42"
9"	–	18"	121"	102"	9.5"	127"	8"	8"	60"	48"
10"	–	21"	126"	108"	10"	132"	9"	12"	60"	54"
11"	–	24"	140"	120"	10"	146"	12"	12"	60"	60"

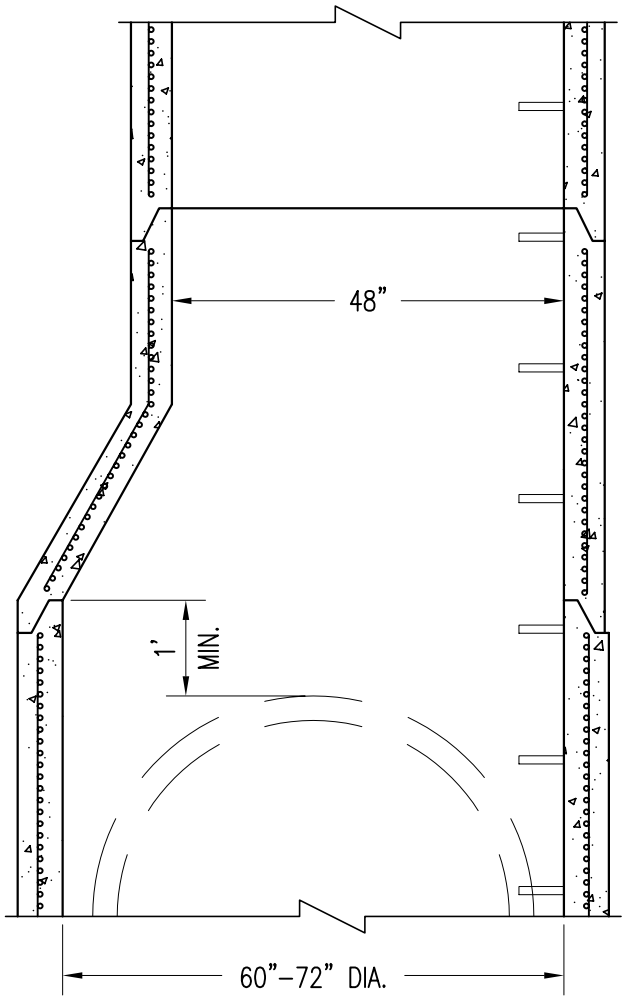
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STRUCTURE TYPE 4 (XX in.) MANHOLE DIMENSIONS

ASST. CITY ENGINEER | DIRECTOR

SHT 2 OF 2 SHTS	DATE REVISED 3/22/06	PLATE NO. 1–04	REV. A





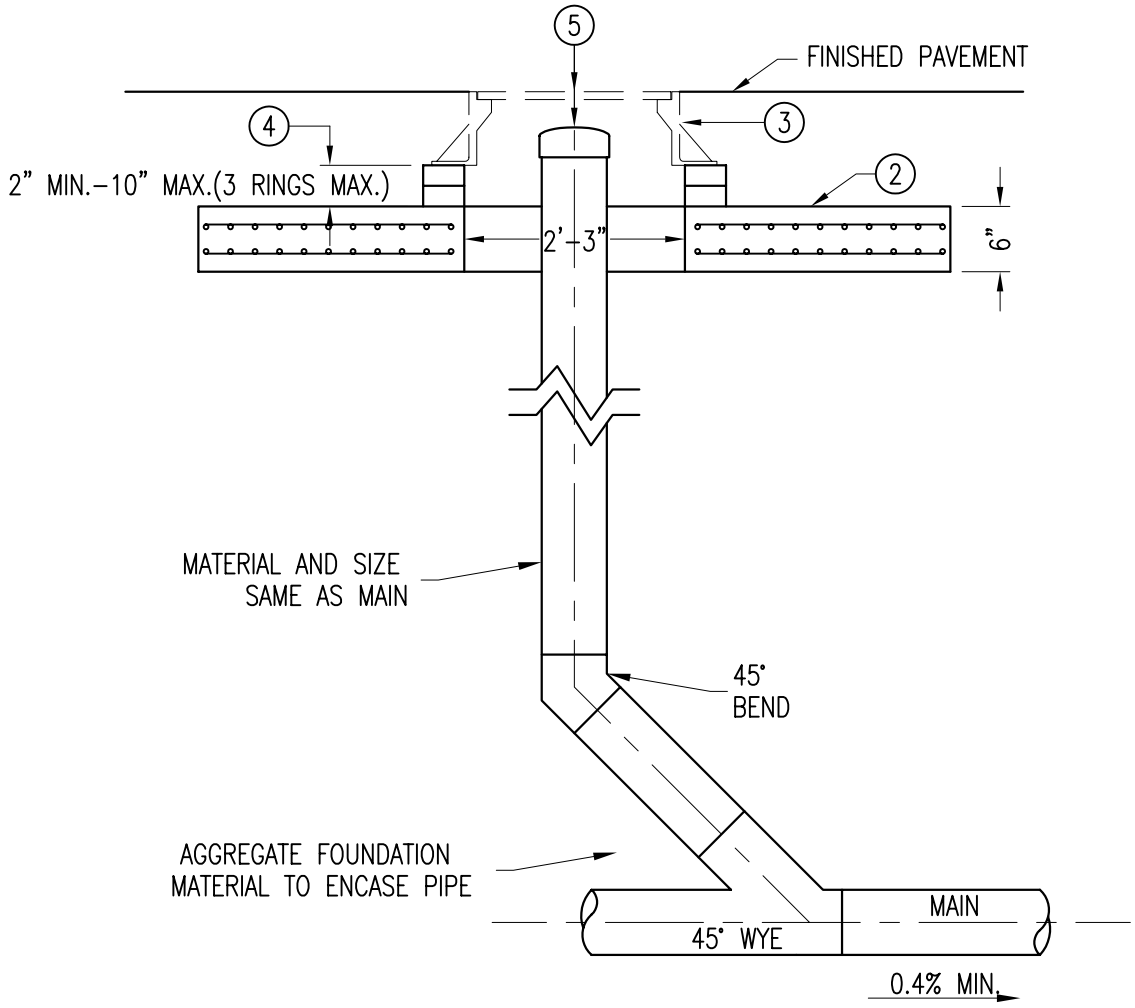
SEE CITY STANDARD PLATES 1–02 THRU
1–04 FOR MANHOLE DETAILS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STRUCTURE TYPE 5 (XX in.) REDUCTION MANHOLE

ASST. CITY ENGINEER	DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 1–05	REV. B



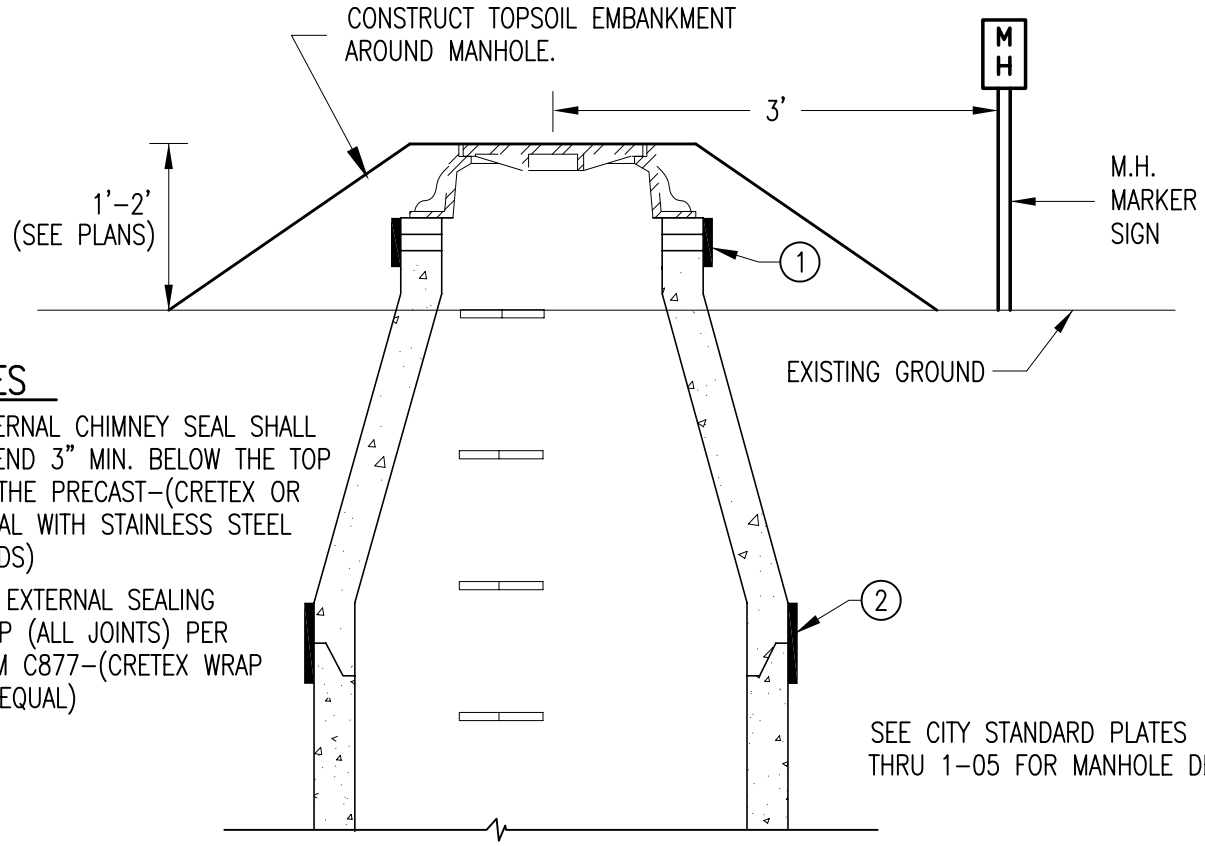
NOTES

1. 48" STRUCTURE SHALL BE USED WHENEVER THE CLEANOUT FALLS INTO PAVEMENT AREAS.
2. MANHOLE COVER SHALL CONFORM TO MN/DOT S.P. 4020 J.
3. REFER TO PLANS AND S.D.P. 1–11 FOR CASTING REQUIRED. CASTING SHALL BE BOLTED TO CONCRETE IN FIELD APPLICATIONS.
4. ADJUSTING RINGS SHALL BE PER S.D.P. 1–12, AND BE FULLY MORTARED.
5. MANHOLE COVER IS TO BE A MINIMUM OF 4" AND A MAXIMUM OF 6" BELOW THE FINISHED PAVEMENT GRADE.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STRUCTURE TYPE 6 (CLEANOUT)

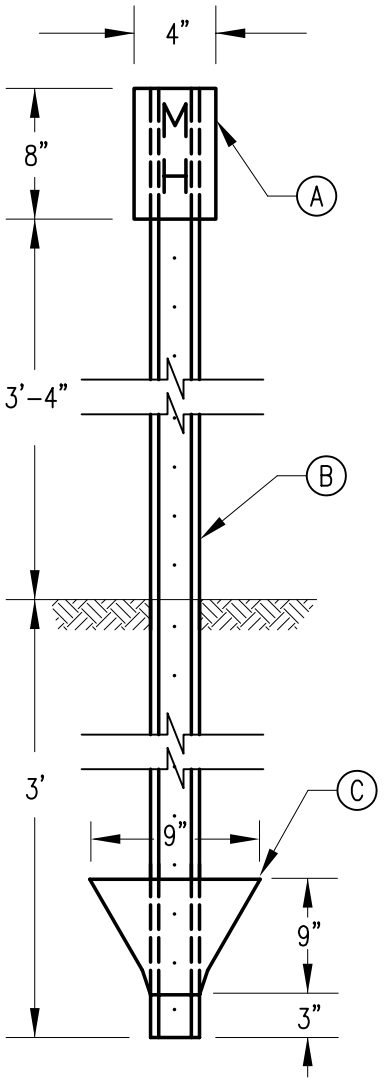
ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 1–06	REV. B	



NOTES

1. EXTERNAL CHIMNEY SEAL SHALL EXTEND 3" MIN. BELOW THE TOP OF THE PRECAST-(CRETEX OR EQUAL WITH STAINLESS STEEL BANDS)
2. 12" EXTERNAL SEALING WRAP (ALL JOINTS) PER ASTM C877-(CRETEX WRAP OR EQUAL)

SEE CITY STANDARD PLATES 1-03 THRU 1-05 FOR MANHOLE DETAILS.



NOTES

A. SHEET ALUMINUM SIGN BOLTED TO POST. SIGN SHALL READ "M.H." IN 2 INCH BLACK LETTERS ON WHITE REFLECTORIZED BACKGROUND.

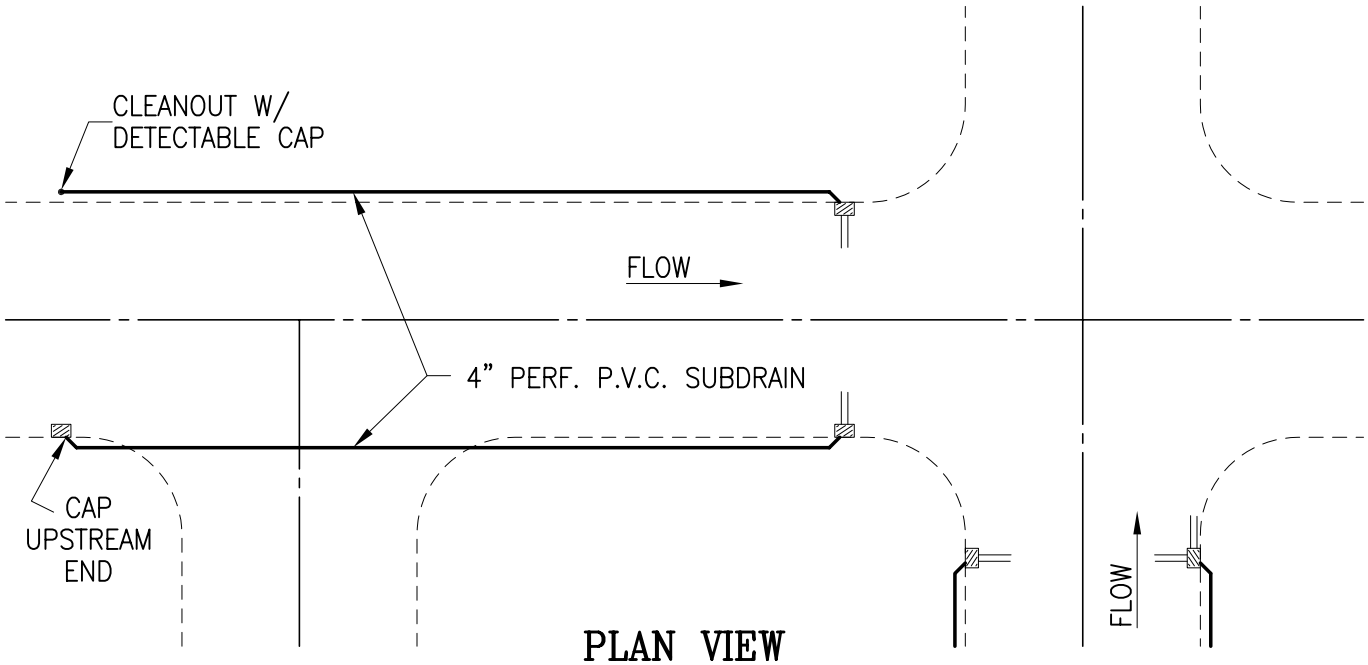
B. FLANGED CHANNEL SIGN POSTS SHALL BE A MINIMUM OF 2.75 POUNDS PER FOOT, AND SHALL MEET MN/DOT 3401.

C. 1/8" SHEET STEEL SHALL BE ASTM A1011, GRADE D SHALL BE BOLTED OR WELDED TO CHANNEL.

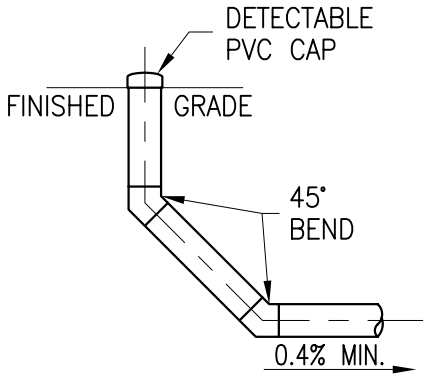
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

MANHOLE WATERPROOFING (NON-PAVED AREAS)

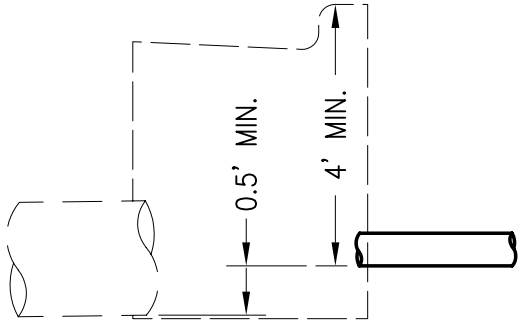
ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 1-07	REV. A	



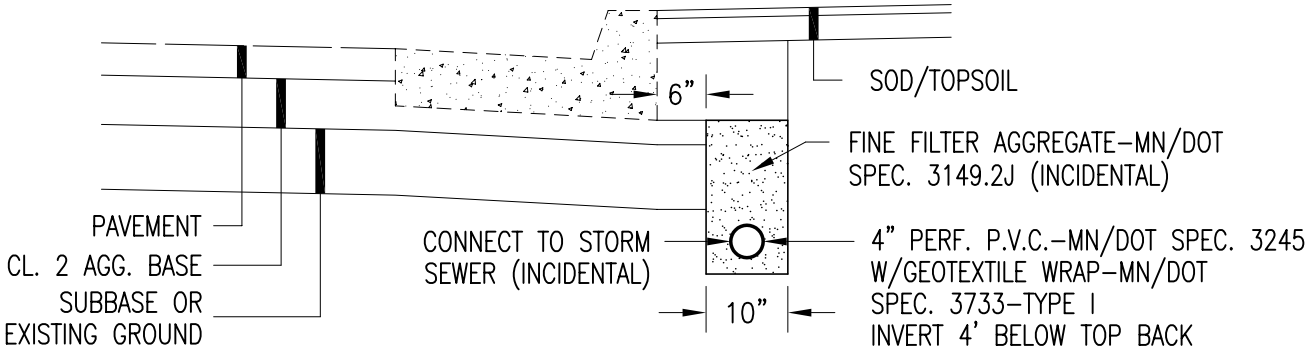
PLAN VIEW
EDGE SUBDRAIN CONNECTIONS



SUBDRAIN CLEANOUT



SUBDRAIN AT STRUCTURE

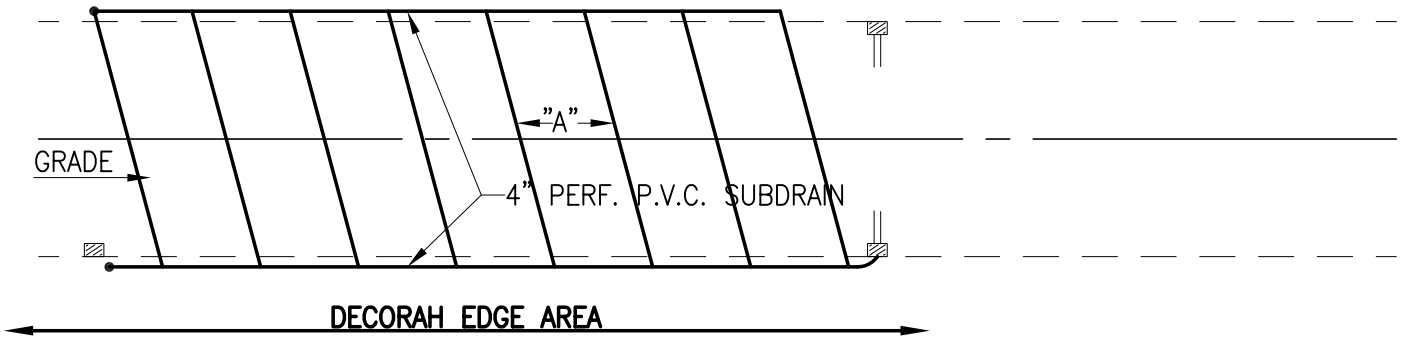


SECTION VIEW
EDGE SUBDRAIN DETAIL

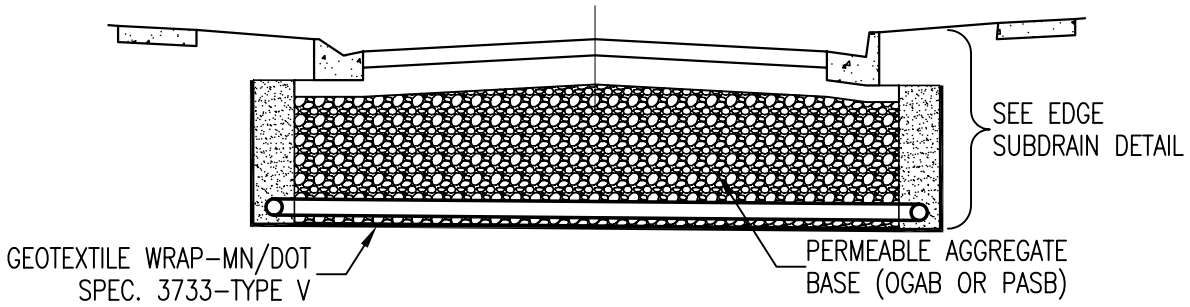
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

SUBSURFACE EDGE DRAINS

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 2 SHTS	DATE REVISED 6/15/07	PLATE NO. 1–08	REV. C	



PLAN VIEW
FULL ROADWAY SUBSURFACE DRAIN



SECTION VIEW
SUBSURFACE DRAIN

RECOMMENDED SPACING BETWEEN SUBDRAIN PIPES	
LONGITUDINAL GRADE	"A"
0% TO 3%	60'
3% TO 5%	40'
5% TO 10%	20'

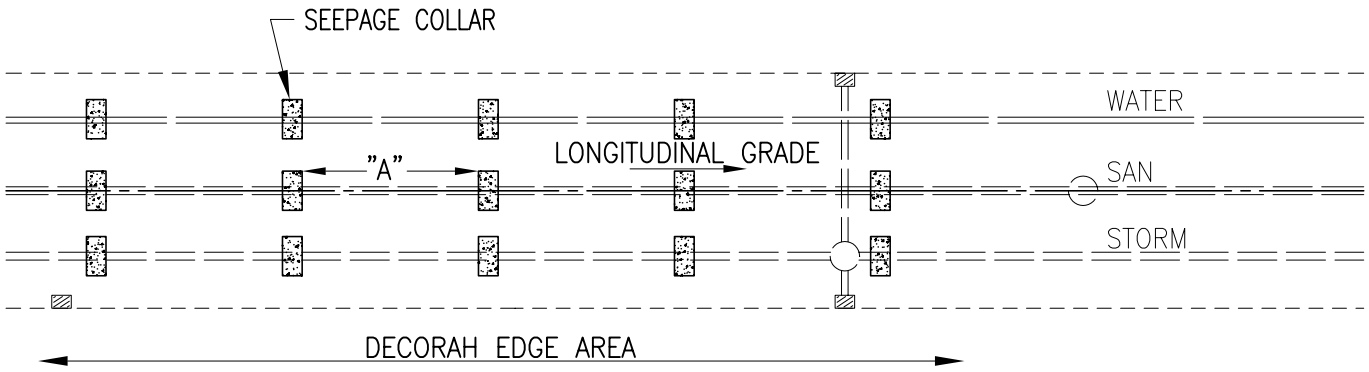
NOTES
FOR COLLECTOR OR ARTERIAL ROADWAYS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

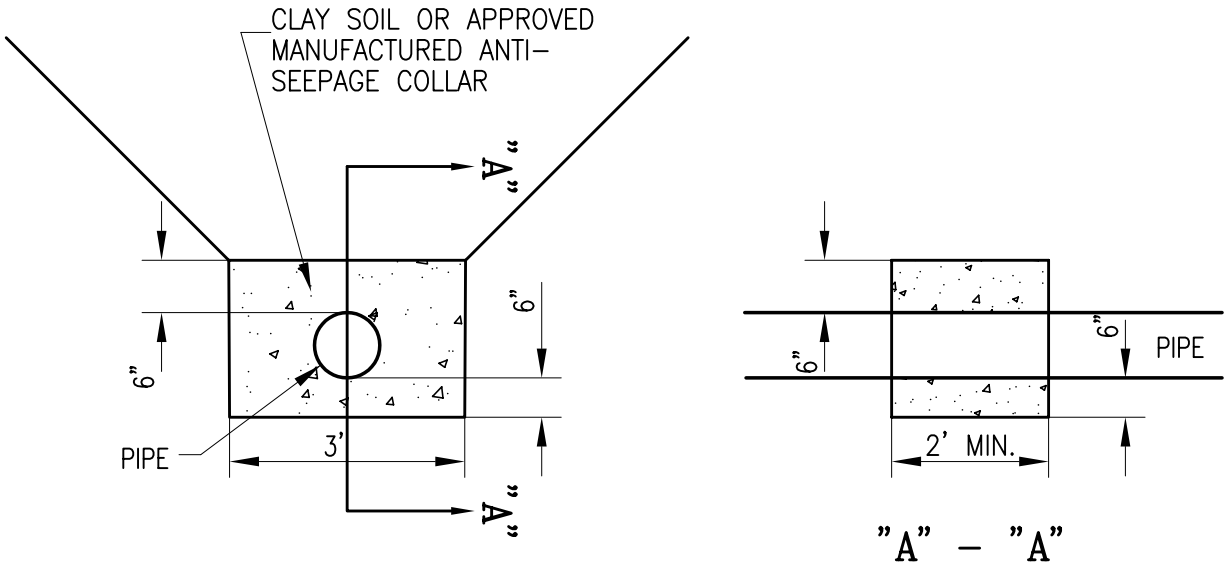
DECORAH EDGE ROADWAY DETAIL

ASST. CITY ENGINEER | DIRECTOR

SHT 2 OF 2 SHTS	DATE REVISED 6/15/07	PLATE NO. 1–08	REV. A



PLAN VIEW
UNDERGROUND UTILITIES



SECTION VIEW
SEEPAGE COLLAR

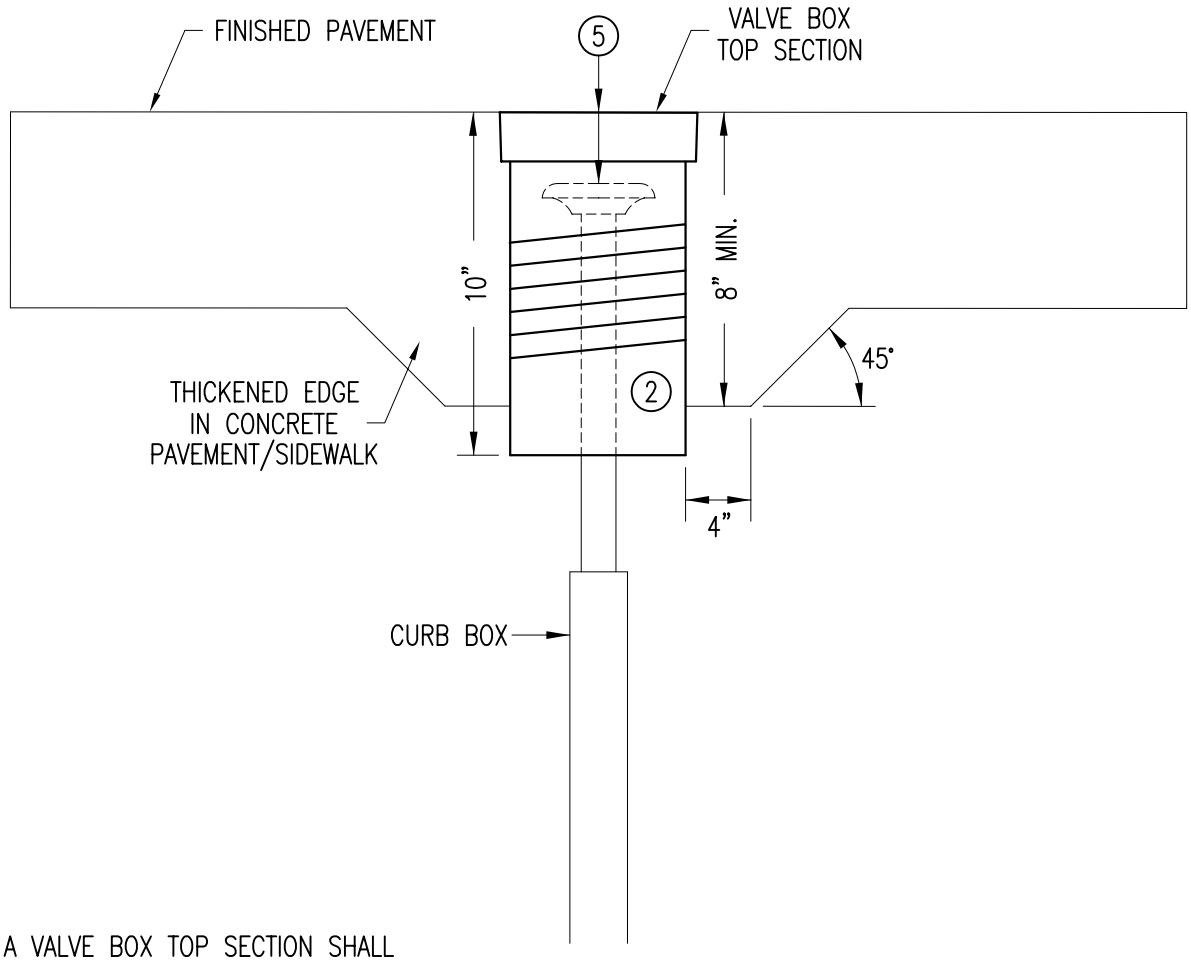
RECOMMENDED SPACING BETWEEN SEEPAGE COLLAR	
LONGITUDINAL GRADE	"A"
0% TO 3%	100'
3% TO 5%	50'
5% TO 10%	25'

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

DECORAH EDGE UTILITY DETAIL

ASST. CITY ENGINEER | DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 1-09	REV. A



1. A VALVE BOX TOP SECTION SHALL BE USED AS A CURB BOX COVER WHENEVER THE CURB BOX FALLS INTO NEW OR REPLACED CONCRETE SIDEWALK, DRIVE APPROACH, OR BITUMINOUS PAVEMENT AREAS.

(2) VALVE BOX TOP SECTION SHALL BE OF THE SCREW TYPE, HAVE A MINIMUM INSIDE SHAFT DIAMETER OF 5 1/4", AND HAVE A CAP WITH THE WORD "WATER" PLAINLY MARKED ON TOP.

3. IN ALL RESPECTS THE VALVE BOX SHALL BE EQUAL TO TYLER/UNION–10T–UPC#144939.

4. VALVE BOX COVER SHALL BE OF THE LOCKING TYPE, EQUAL TO A TYLER/UNION UPC#145462.

(5) CURB BOX RISER CAP IS TO BE A MINIMUM OF 4" AND A MAXIMUM OF 6" BELOW THE FINISHED PAVEMENT GRADE.

6. CURB BOX RISER ADJUSTMENT, AND THE FURNISHING & INSTALLATION OF VALVE BOX TOP SECTION AND COVER, SHALL BE INCLUDED IN PAYMENT FOR CURB BOX COVER.

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CITY OF ROCHESTER, MINNESOTA

CURB BOX COVER

ASST. CITY ENGINEER	DIRECTOR		
SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 1–10	REV. B

CASTINGS – STRUCTURE TYPE 1

TYPE	DESCRIPTION	CASTING NUMBER	LID/GRATE	REMARKS
A	2' CURB INLET FRAME GRATE & BOX	R–3010	TYPE R–DIAGONAL	FOR M.H. TYPE STRUCTURE (36" DIA. BASE)
B	3' CURB INLET FRAME GRATE & BOX	R–3067–7002	TYPE R–DIAGONAL	FISH LOGO–3779
C	3' DRIVEWAY CURB INLET FRAME	R–3290–A	TYPE C	USE WHERE DRIVEWAY PRECLUDES USE OF TYPE B IN B. CURB
D	3' DRIVEOVER CURB INLET FRAME & GRATE	R–3510	TYPE C	USE WHERE DRIVEWAY PRECLUDES USE OF TYPE B IN D.O. CURB
V	3' CURB INLET FRAME GRATE & BOX	R–3067–7002	TYPE V	USE WHEN STREET GRADE EXCEEDS 2% FISH LOGO–3779

CASTINGS – OTHER STRUCTURES

	TYPE	DESCRIPTION	CASTING NUMBER	LID/GRATE	REMARKS
LIDS	1	9" FRAME AND COVER NON–ROCKING	R–1710	TYPE B LID	W/2 CONCEALED PICK HOLES
	2	9" FRAME & COVER	R–1916–C	SELF–SEALING BOLTED LID	TO BE USED IN FLOOD PRONE OR OFF STREET AREAS & IN CONCRETE PAVING
	3	6 1/2" FRAME & COVER NON–ROCKING	R–1700–A	TYPE B LID	NOT FOR USE ON NEW CONSTRUCTION, W/2 CONCEALED PICK HOLES
	3A	7" FRAME AND COVER NON–ROCKING	R–1740–B	TYPE B LID	TO BE USED FOR P.R.V. MANHOLES
GRATES	4	9" FRAME AND GRATE NON–ROCKING	R–2533	TYPE A GRATE	PAVEMENT DRAIN
	5	9" BEEHIVE FRAME	R–2560–D3	7" GRATE BEEHIVE	USE ONLY WHEN TYPES 6 OR 7 CANNOT BE USED
	6	DITCH GRATE–STOOL TYPE	R–4341–A	STOOL GRATE	HEAVY DUTY
	7	DITCH GRATE–STOOL TYPE	R–4342	STOOL GRATE	LIGHT DUTY
	8	POND SKIMMER GRATE	*	1/2" STEEL PLATE	HOT DIPPED GALVANIZED

ALL CASTING NUMBERS SHOWN ARE NEENAH FOUNDRY CATALOG NUMBERS. APPROVED EQUAL MAY BE SUBSTITUTED.

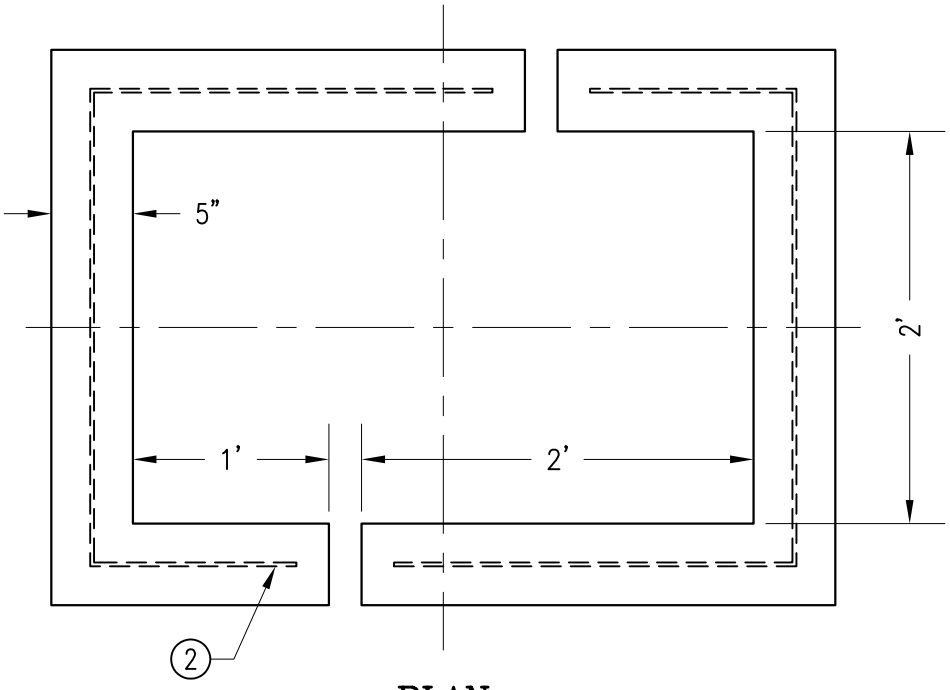
* HAALA INDUSTRIES CASTING, OR AN APPROVED EQUAL MAY BE SUBSTITUTED.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

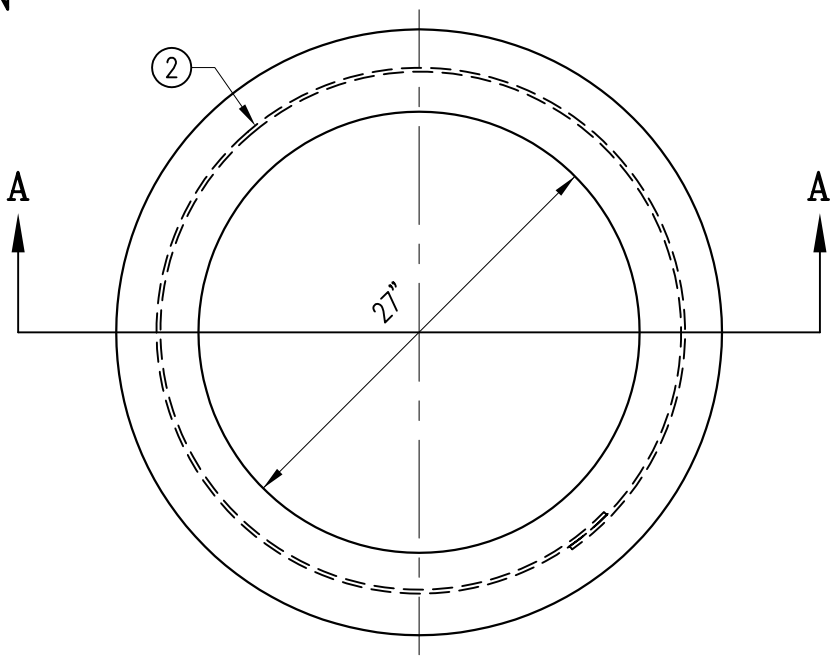
CASTING SCHEDULE

Douglas M. Nelson — ASST. CITY ENGINEER
Russell W. Fries — DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 1–11	REV. G



PLAN



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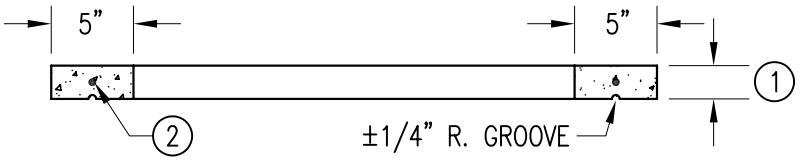


SECTION A–A

NOTES

(1) VARIABLE THICKNESS OF 2” MIN. AND 6” MAX.

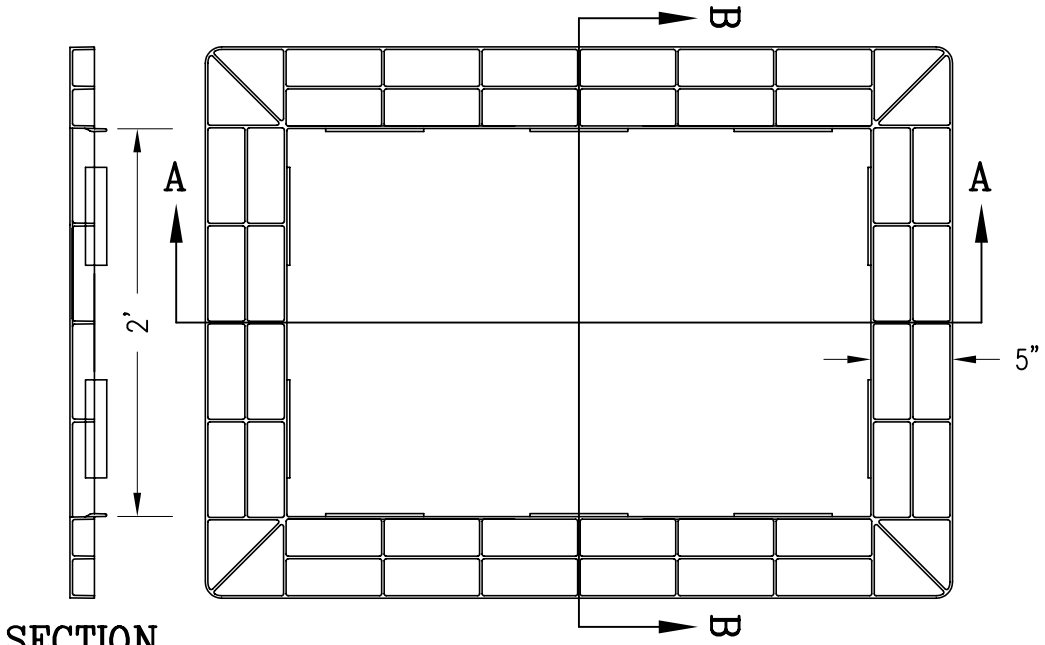
(2) REINFORCEMENT SHALL BE A SINGLE HOOP OF #8 GAGE STEEL WIRE

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CONCRETE STRUCTURE ADJUSTING RINGS

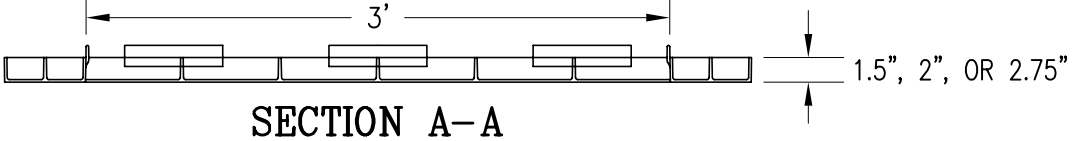
Douglas Nelson — ASST. CITY ENGINEER
Russell W. Fries — DIRECTOR

SHT 1 OF 3 SHTS	DATE REVISED 3/22/06	PLATE NO. 1–12	REV. C

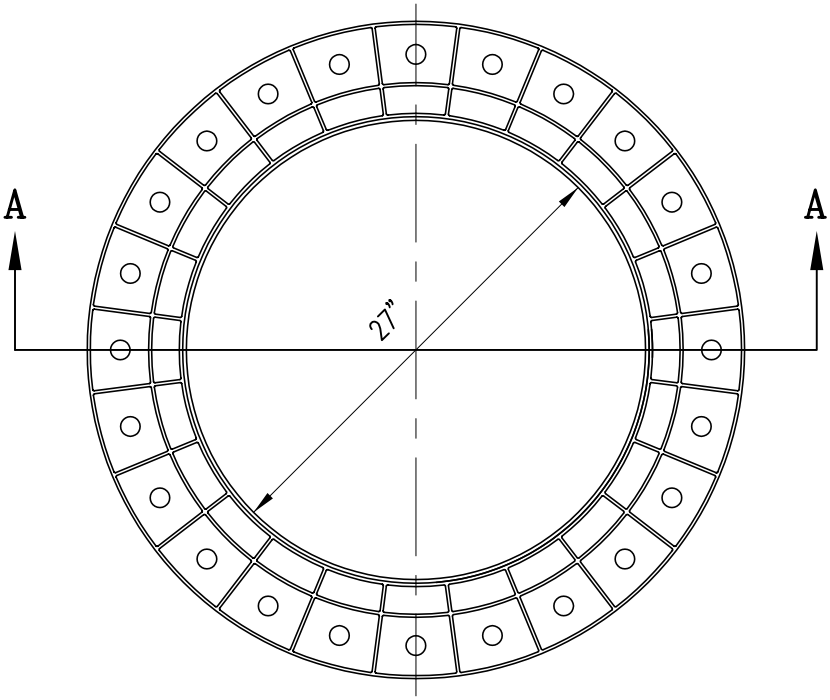


SECTION B–B

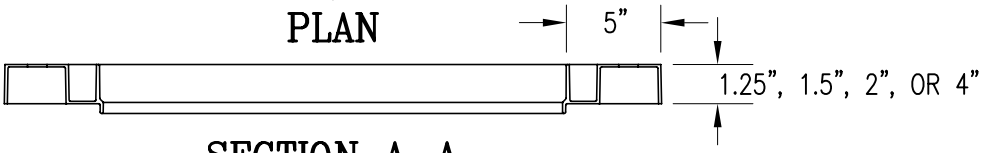
PLAN



SECTION A–A



PLAN



SECTION A–A

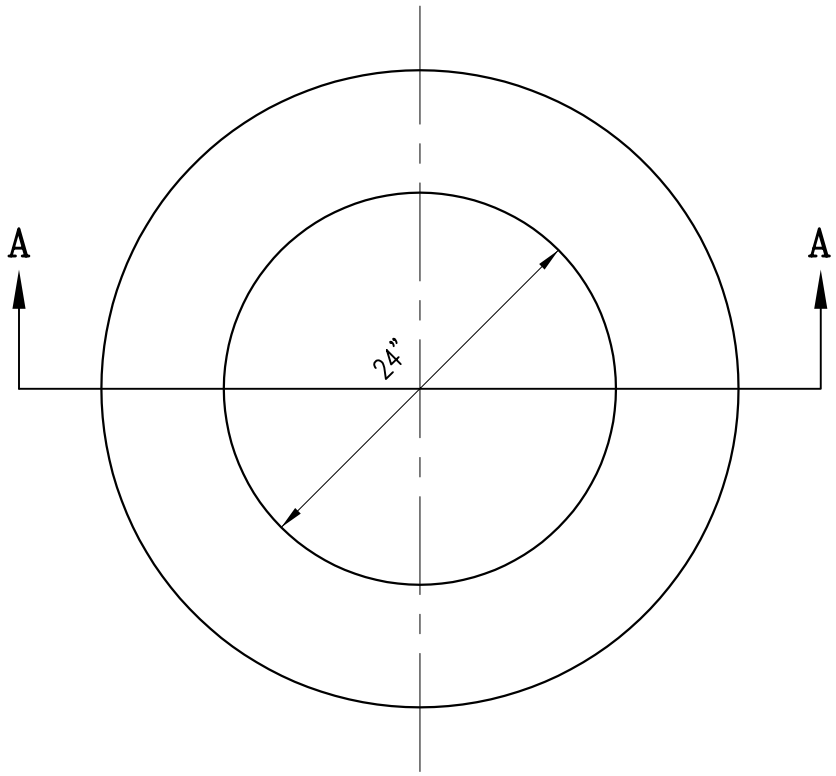
NOTES

(1) SLEEVE SHALL BE MOLDED FROM HIGH DENSITY POLYETHYLENE MATERIAL AS DEFINED IN ASTM D1248.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

POLYETHYLENE STRUCTURE ADJUSTING RINGS

ASST. CITY ENGINEER	DIRECTOR			
SHT 2 OF 3 SHTS	DATE REVISED 3/22/06	PLATE NO. 1–12	REV. A	



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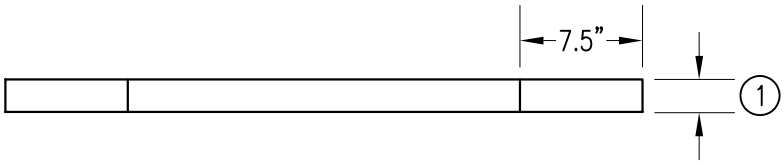


SECTION A–A

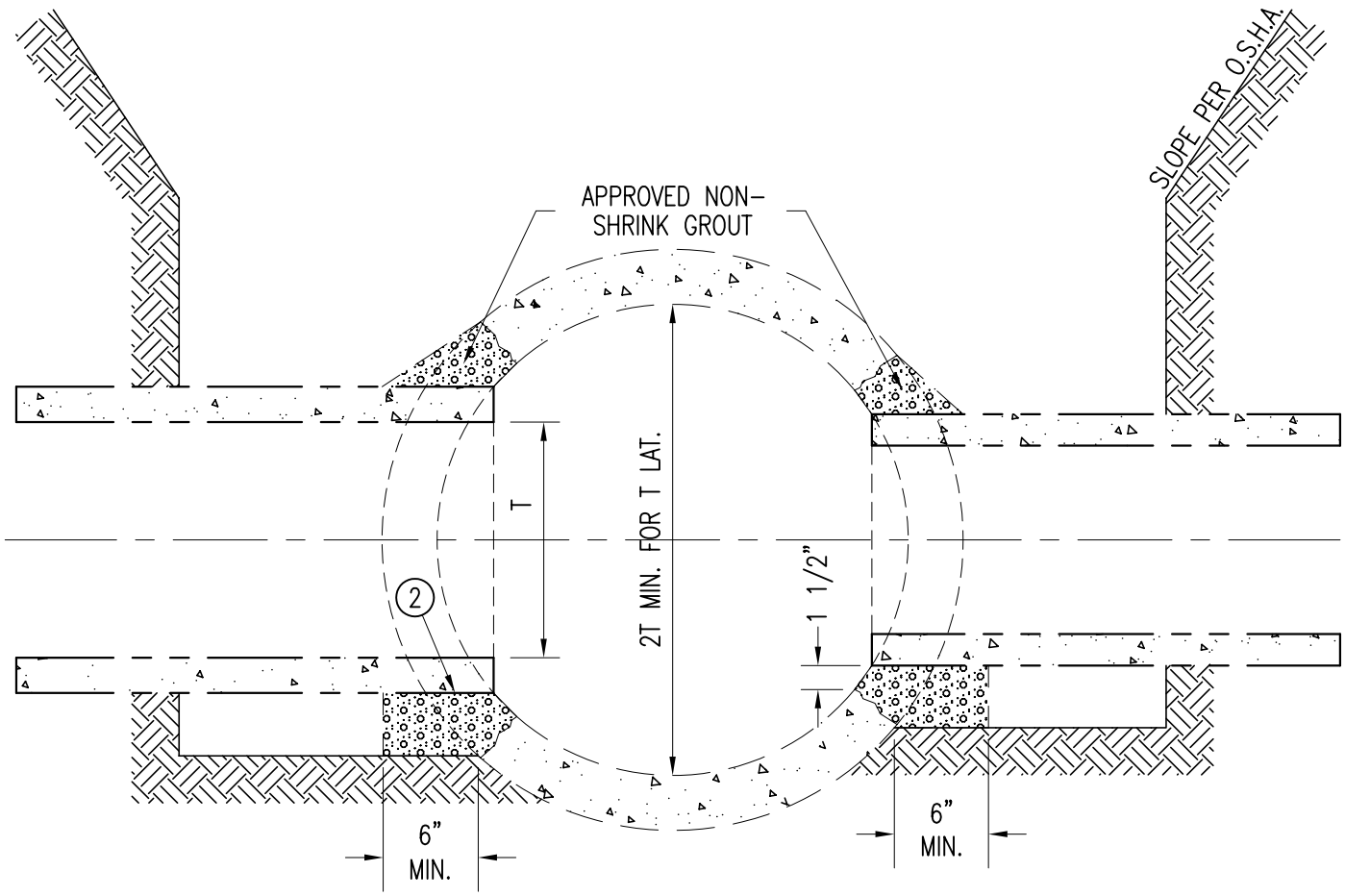
NOTES

1. VARIABLE THICKNESS OF 1/2" TO 3" IN INCREMENTS OF 1/2".
2. MATERIAL SHALL MEET ASTM 642–90 FOR DENSITY.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

RUBBER STRUCTURE ADJUSTING RINGS

ASST. CITY ENGINEER	DIRECTOR			
SHT 3 OF 3 SHTS	DATE REVISED 3/22/06	PLATE NO. 1–12	REV. A	



NOTES

1. MANHOLE REQUIRED WHERE LATERAL PIPE OR CONNECTING PIPE EXCEEDS 1/2 MAIN PIPE DIAMETER.

(2) LATERAL PIPE SHALL NOT EXTEND INTO THE CROSS SECTION OF MAIN PIPE BEYOND THAT REQUIRED FOR FULL WALL SUPPORT.

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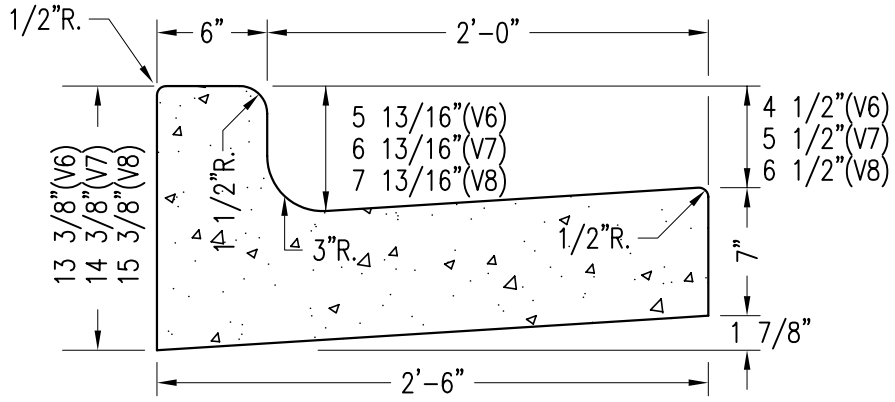
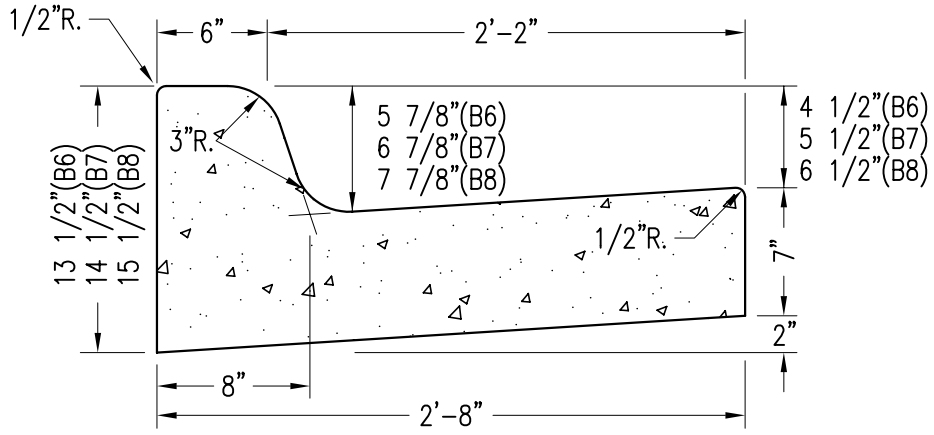
CITY OF ROCHESTER, MINNESOTA

BLIND–TIE FIELD CONNECTION FOR R.C.P. STORM SEWER

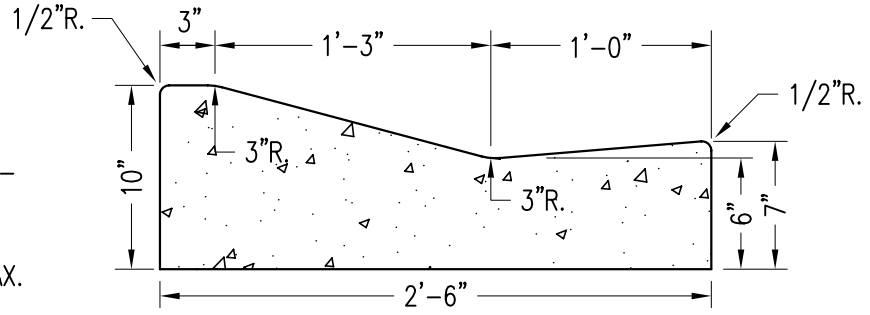
ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 1–13	REV. B	



DESIGN "V"(VERTICAL)



DESIGN "B"(BATTERFACE)



DESIGN "D"(DRIVEOVER)

NOTES

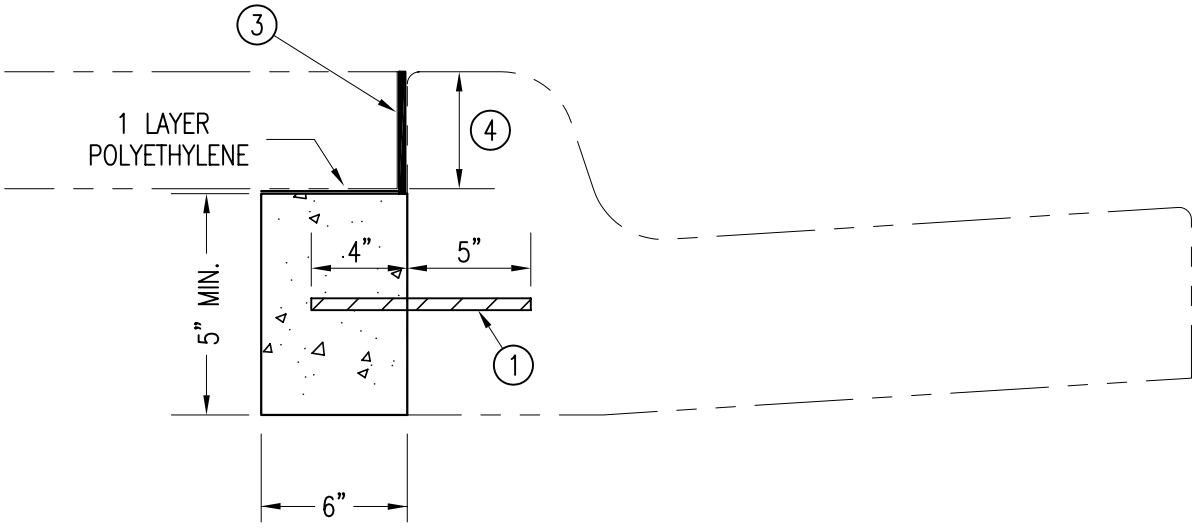
1. CONCRETE MIX: MANUAL PLACEMENT–MN/DOT SPEC. 3A32, SLIP–FORM PLACEMENT–MN/DOT SPEC. 3A22.
2. PROVIDE 1/2" EXP. JT. AT 300' MAX. SPACING AND TO MATCH PAVEMENT EXP. JTS. IN ADDITION TO EXP. JTS. SHOWN ON OTHER DETAIL PLATES.
3. PROVIDE CONTRACTION JTS. @ 9' MAX. SPACING, SAW CUT 2" MIN. DEPTH.
4. ALL CONC. C. & G. SHALL BE PLACED ON A MIN. OF 4" CLASS II AGGREGATE BASE.
5. SILL REQUIRED FOR DESIGN "V" AND "B", WHEREVER SIDEWALK ABUTS CURB. SEE S.D.P. 2–02.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CONCRETE CURB & GUTTER

ASST. CITY ENGINEER | DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 2–01	REV. C



MODIFIED B624 CURB & GUTTER
MODIFIED V624 CURB & GUTTER (SIMILAR)

NOTES

(1) TIE SILL AT 3'-0" CENTERS WITH 9" x #13 REINFORCING BARS OR POUR INTEGRALLY WITH CURB.

2. TO BE USED AT ALL CURB RETURNS AND WHERE SIDEWALK ABUTS CURB & GUTTER.

(3) 1/2" PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702.

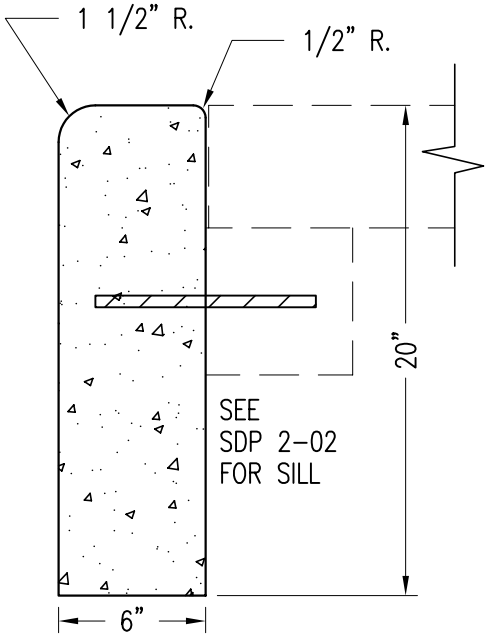
(4) DIMENSION TO BE SAME AS SIDEWALK THICKNESS, 5" MIN.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CONCRETE SILL

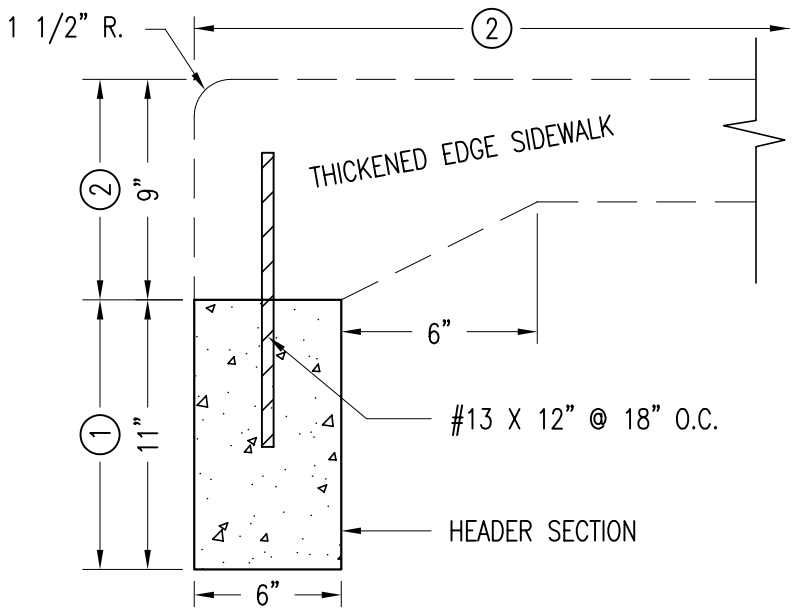
ASST. CITY ENGINEER | DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 2-02	REV. D



STRAIGHT CURB
U-1A

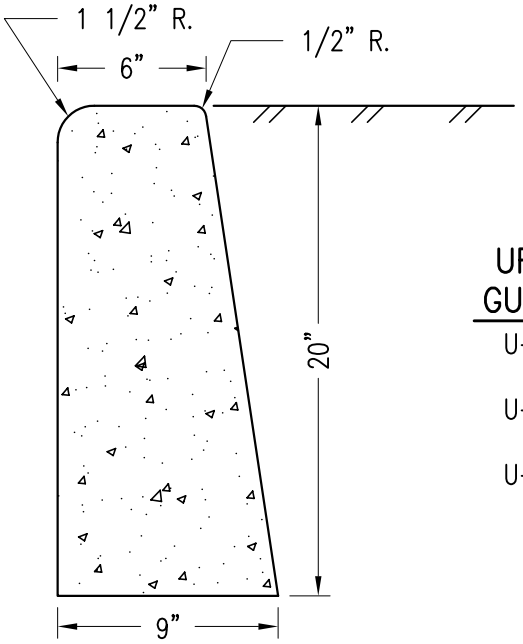
USE WHERE SIDEWALK EXISTS
AND ON CURVES



CURB & SIDEWALK
U-2A

NOTES

1. INCLUDED IN PAYMENT FOR U-2A CURB PER LIN. FT.
2. INCLUDED IN PAYMENT FOR SIDEWALK CONSTRUCTION PER SQ. FT.
3. THESE DETAILS SHALL ONLY BE USED FOR RESTORATION OR PARTIAL RECONSTRUCTION WORK. NEW CONSTRUCTION SHALL USE C. & G. PER S.D.P. 2-01 OR CURB INTEGRAL TO CONCRETE PAVEMENT.



STRAIGHT CURB
U-1B

USE WHEN THERE IS NO SIDEWALK
AND CURB & GUTTER IS NOT DESIRABLE

PAY QUANTITIES
URBAN TYPE CURB, GUTTER, & SIDEWALK

U-1A	STRAIGHT CURB LIN. FT.
U-1B	STRAIGHT CURB LIN. FT.
U-2A	HEADER SECTION LIN. FT.
	SIDEWALK SECT. SQ. YD.

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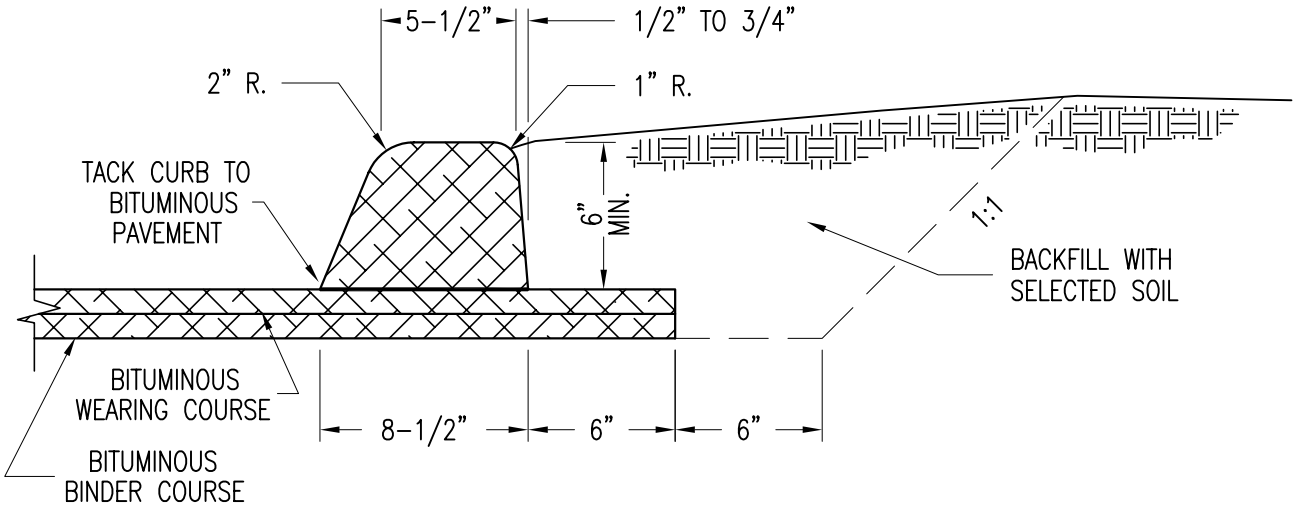
CITY OF ROCHESTER, MINNESOTA

URBAN TYPE CURB AND SIDEWALK

ASST. CITY ENGINEER	DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 2-03	REV. D



CROSS SECTION

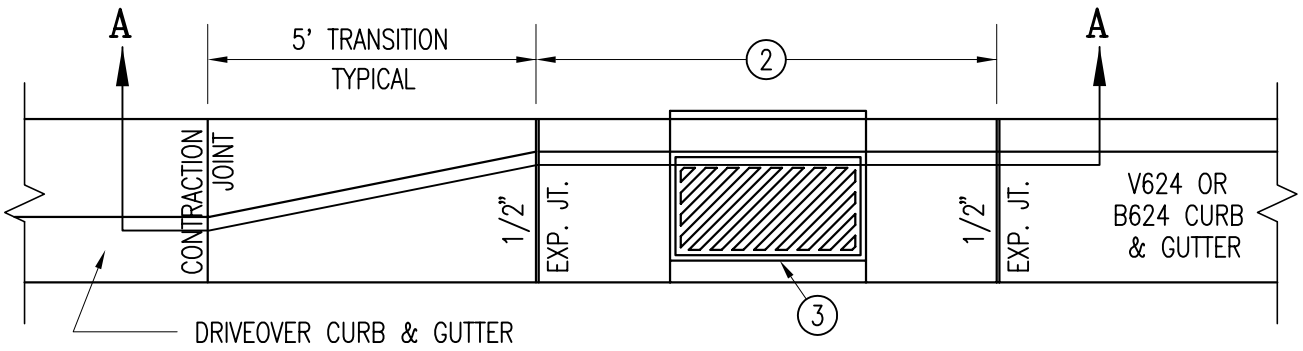
NOTE

VOLUME OF CURB = 0.288 CU. FT. PER LIN. FT.
WEIGHT OF CURB = 21.12 TONS PER 1000 LIN. FT.

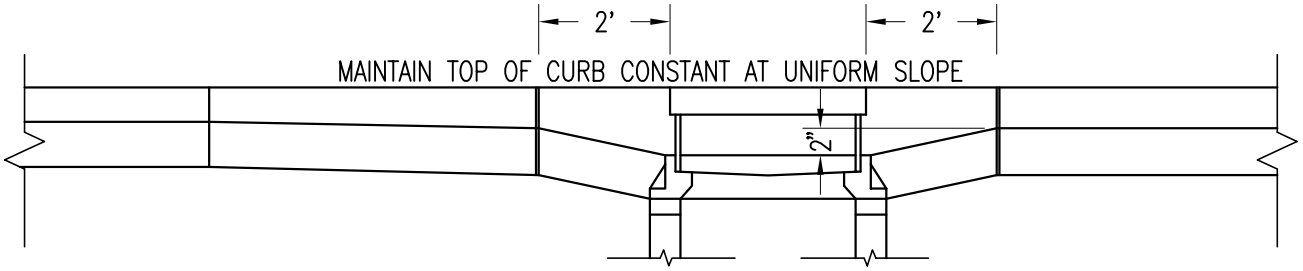
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

BITUMINOUS CURB

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 2-04	REV. A	



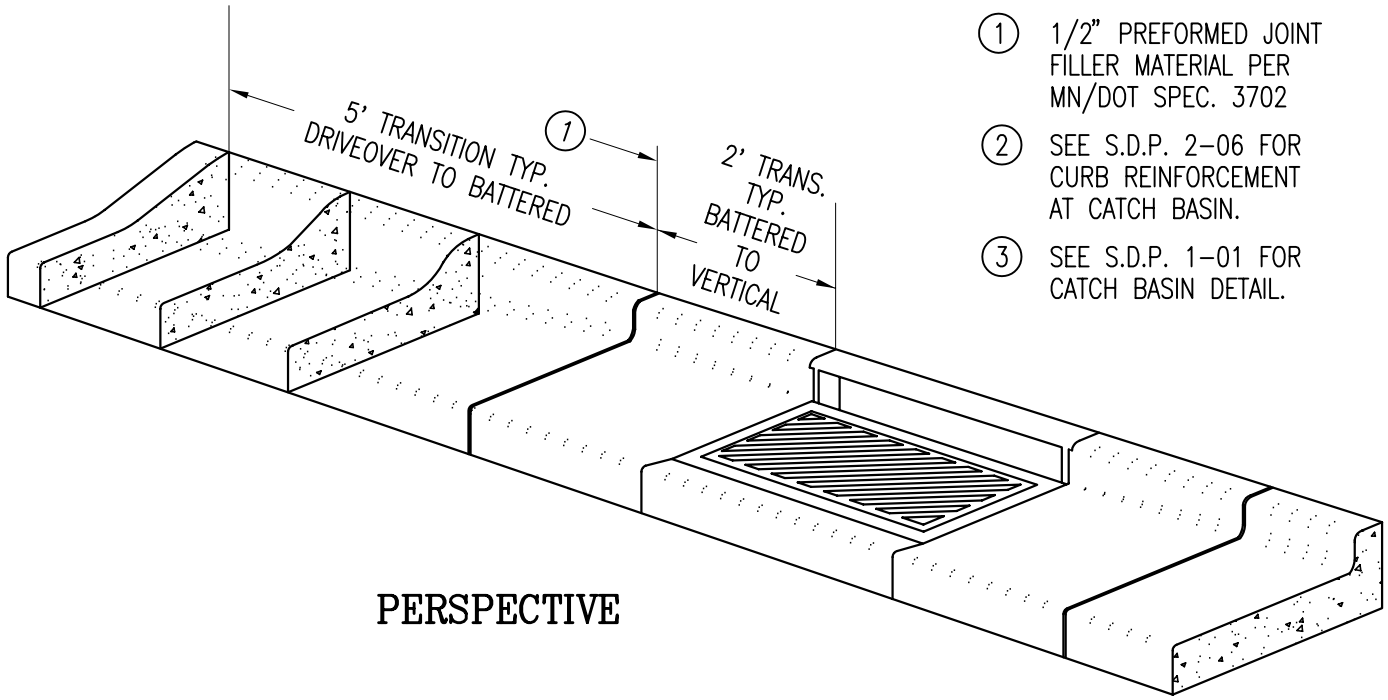
PLAN



SECTION A–A

NOTES

1. 1/2" PREFORMED JOINT FILLER MATERIAL PER MN/DOT SPEC. 3702
2. SEE S.D.P. 2–06 FOR CURB REINFORCEMENT AT CATCH BASIN.
3. SEE S.D.P. 1–01 FOR CATCH BASIN DETAIL.

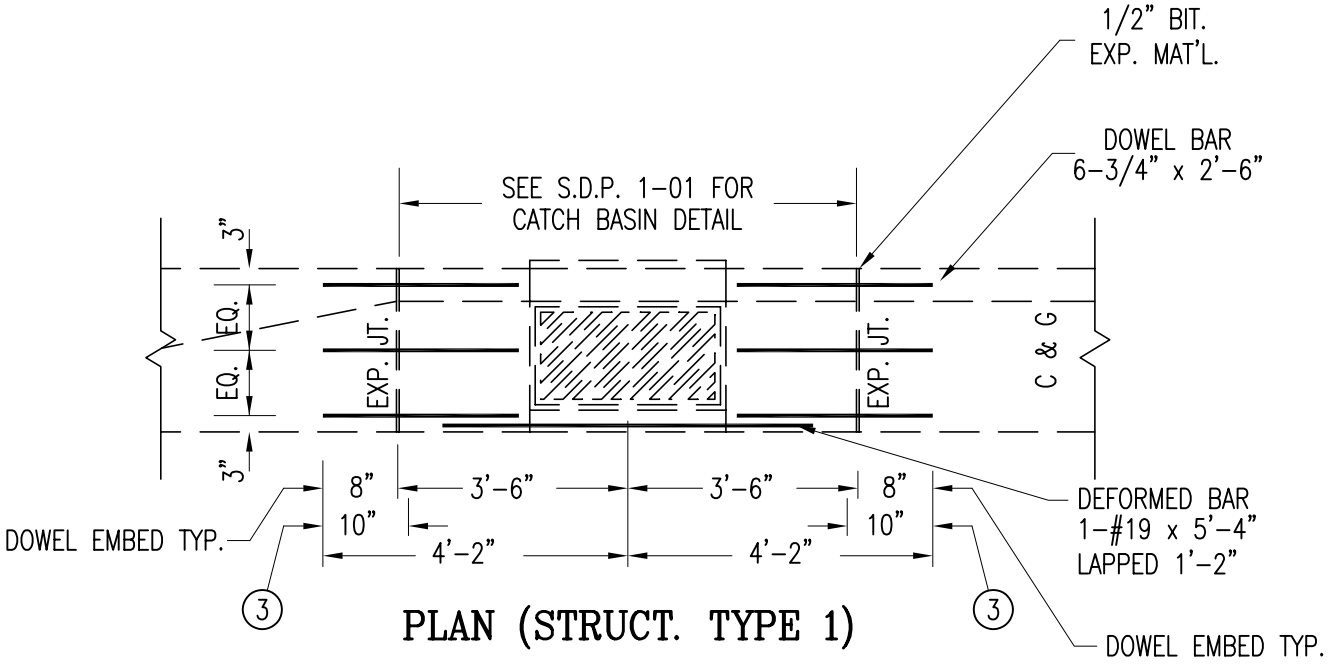


PERSPECTIVE

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TRANSITION CURB & GUTTER DRIVEOVER TO TYPE B OR V

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 1/1/00	PLATE NO. 2–05	REV. B	



PLAN (STRUCT. TYPE 1)

NOTES

1. DOWEL BARS SHALL BE PER MN/DOT SPEC. 3302 (EPOXY COATED).

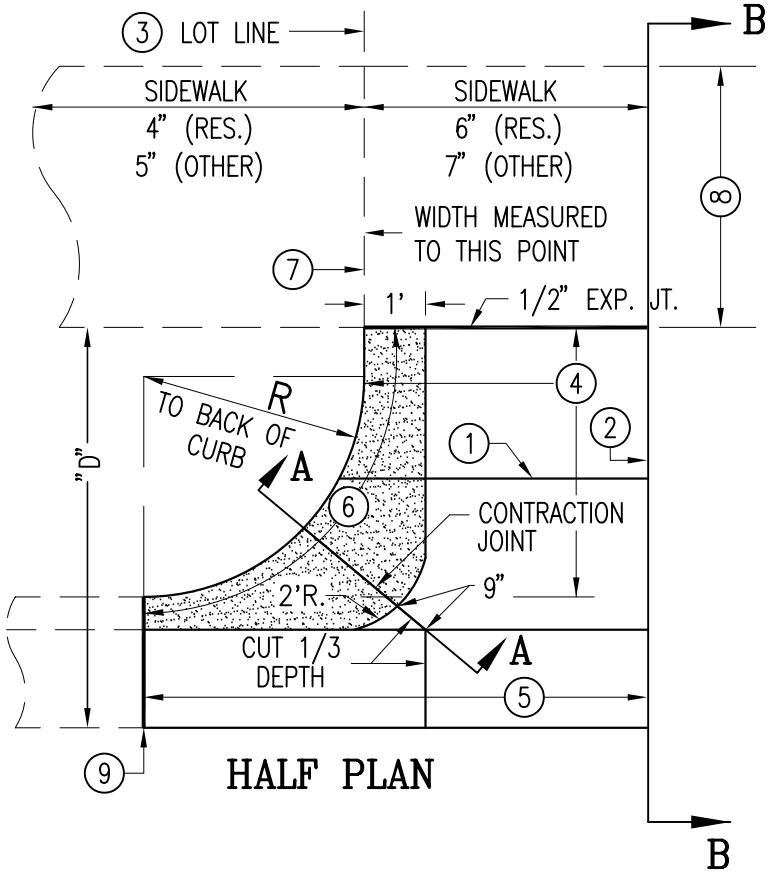
2. DEFORMED BAR SHALL BE PER MN/DOT SPEC. 3301 (EPOXY COATED).

(3) COAT THE DOWEL BARS WITH A THIN UNIFORM COATING OF AN APPROVED FORM COATING MATERIAL MEETING MN/DOT SPEC. 3902 NOT MORE THAN ONE HOUR BEFORE COVERING WITH CONCRETE, OR WRAP WITH TEFLON TAPE.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CURB & GUTTER REINFORCEMENT AT CATCH BASINS

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 2-06	REV. C	

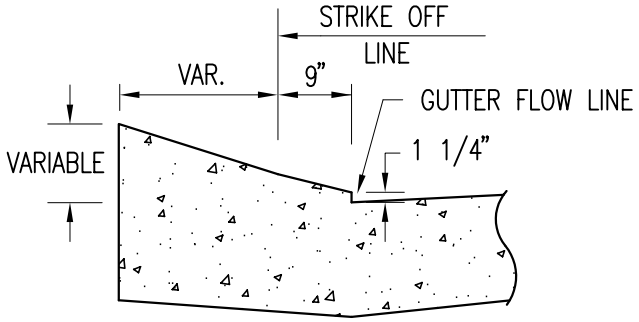


HALF PLAN

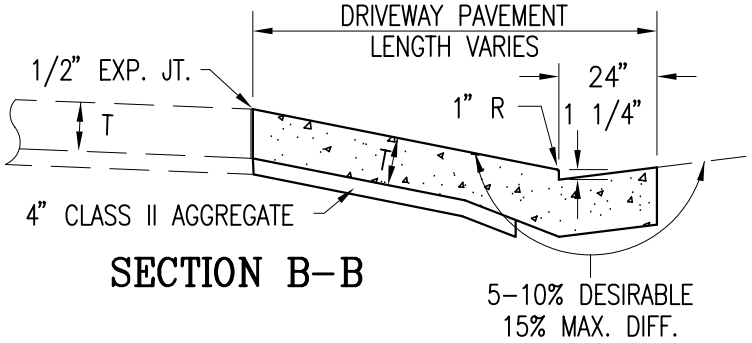
TYPE OF ENTRANCE	WIDTH	R	T
RESIDENTIAL	12'–32'	4'–6"	6"
COMM., IND., ALLEY, R–4	12'–32'	6'–6"	7"

NOTES

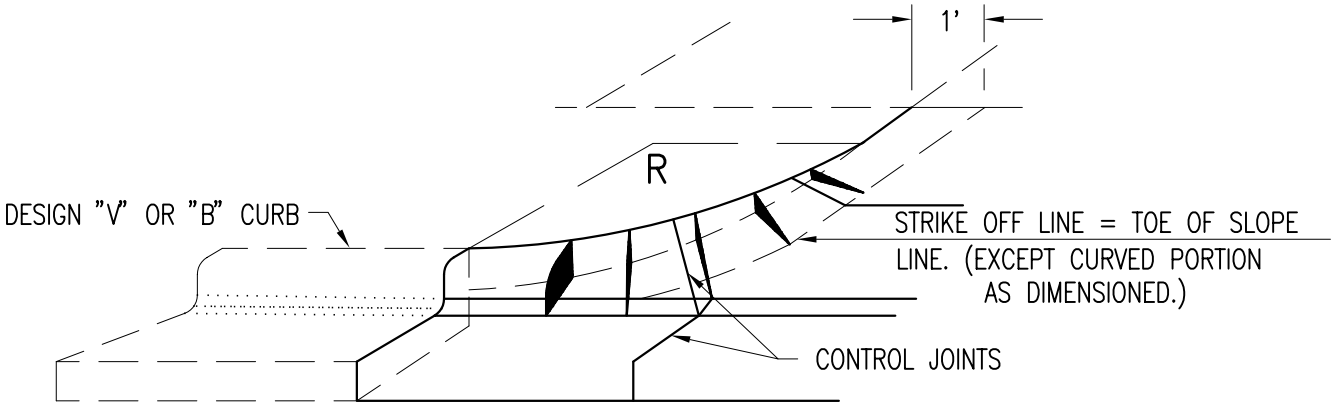
1. TRANSVERSE CONTRACTION JOINT REQUIRED WHEN "D" = 10'–0" OR GREATER, PLACE AT THE CENTER OF THE APPROACH.
2. CONTRACTION JOINTS SPACED SO THAT MAX. SPACING BETWEEN JOINTS DOES NOT EXCEED 1.5 "D" OR 12' WHICHEVER IS LESS, MEASURED AT FLOW LINE.
3. EDGE OF APPROACH AT SIDEWALK LINE MUST BE WITHIN THE LOT SERVED.
4. PAID FOR AS CONCRETE DRIVEWAY PAVEMENT.
5. PAID FOR AS CURB & GUTTER THRU ENTRANCE.
6. SHADED AREA INDICATES CURB TRANSITION FROM FULL EXPOSURE TO ZERO EXPOSURE.
7. CONTRACTION JOINT FOR RESIDENTIAL, 1/2" PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702 FOR OTHER.
8. 36" MINIMUM WALK WIDTH REQUIRED OUTSIDE OF DRIVE TRANSITION AREA.
9. 1/2" PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702.



SECTION A–A



SECTION B–B



PERSPECTIVE

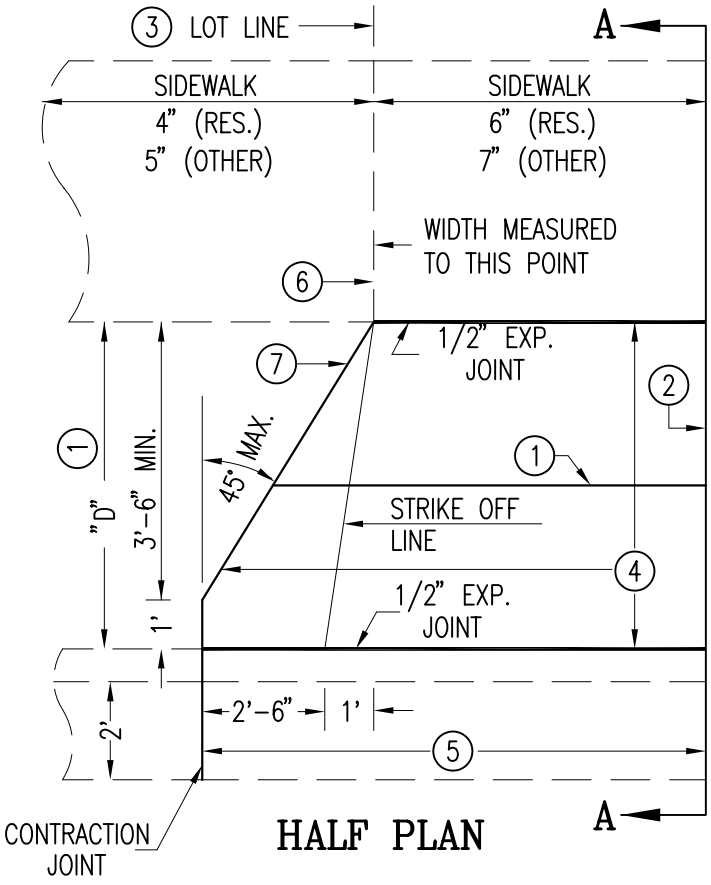
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CONCRETE DRIVE APPROACH TYPE A

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 1/1/00	PLATE NO. 2–07	REV. C	

TYPE OF ENTRANCE	WIDTH	T
RESIDENTIAL, R1, R2	12'–32'	6"
COMM., IND., ALLEY, R–4	12'–32'	7"

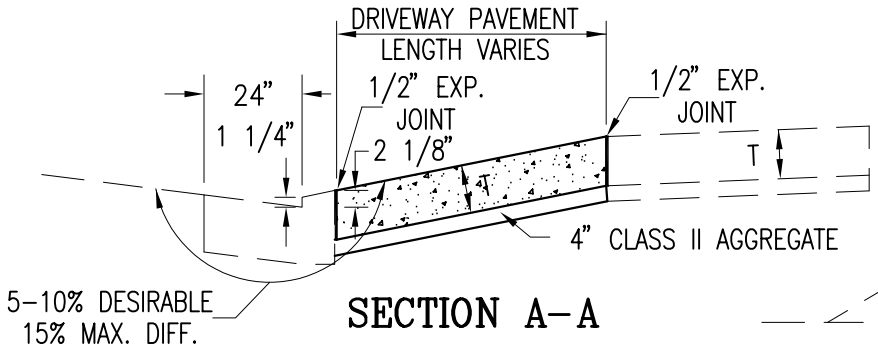
T=THICKNESS OF ENTRANCE AND SIDEWALK



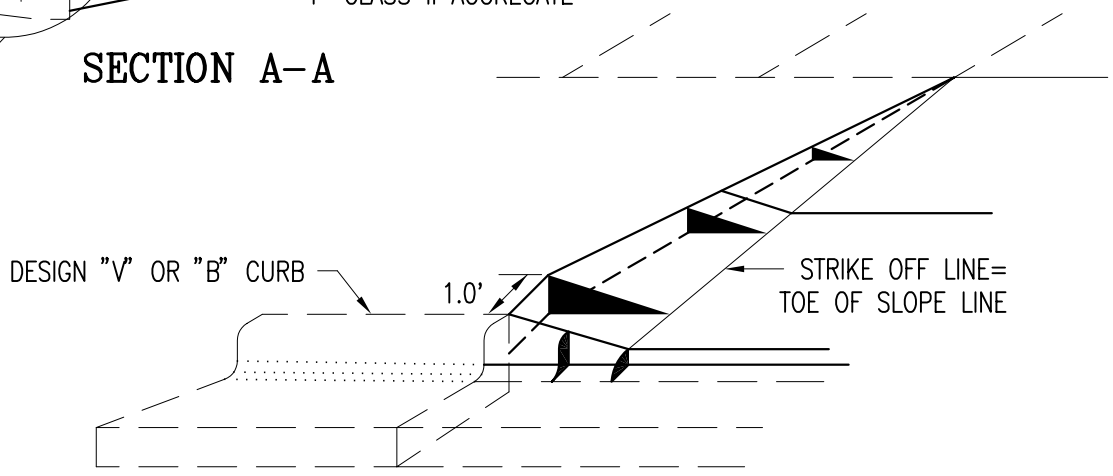
HALF PLAN

NOTES

1. TRANSVERSE CONTRACTION JOINT REQUIRED WHEN "D"=10'–0" OR GREATER, PLACED AT THE CENTER OF THE APPROACH.
2. CONTRACTION JOINTS SPACED SO THAT MAX. SPACING BETWEEN JOINTS DOES NOT EXCEED 1.5 "D" OR 12' WHICHEVER IS LESS, MEASURED AT THE BACK OF CURB.
3. EDGE OF APPROACH AT SIDEWALK LINE MUST BE WITHIN THE LOT SERVED.
4. PAID FOR AS CONCRETE DRIVEWAY PAVEMENT.
5. NO DEDUCTION TO BE MADE IN CURB & GUTTER FOR ENTRANCE.
6. CONTRACTION JOINT FOR RESIDENTIAL, 1/2" PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702 FOR OTHER.
7. TAPER WING TO SIDEWALK WHEN "D" IS 15' OR LESS, OTHERWISE TAPER TO 1/2 "D".



SECTION A–A



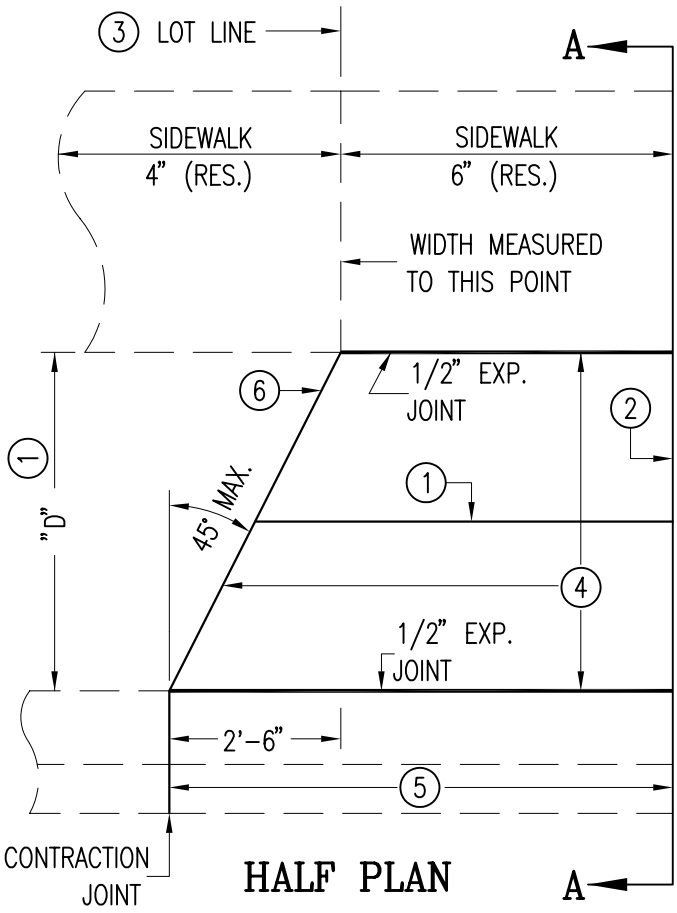
PERSPECTIVE

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CONCRETE DRIVE APPROACH TYPE B

ASST. CITY ENGINEER | DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 4/16/01	PLATE NO. 2–08	REV. D



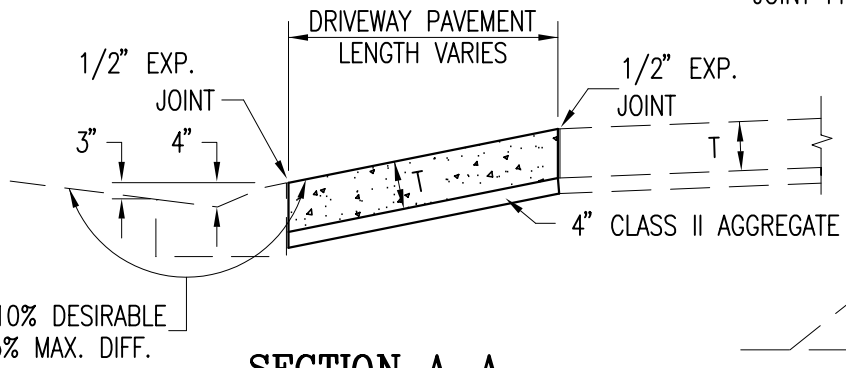
HALF PLAN

TYPE OF ENTRANCE	WIDTH	T
RESIDENTIAL	12'-32'	6"

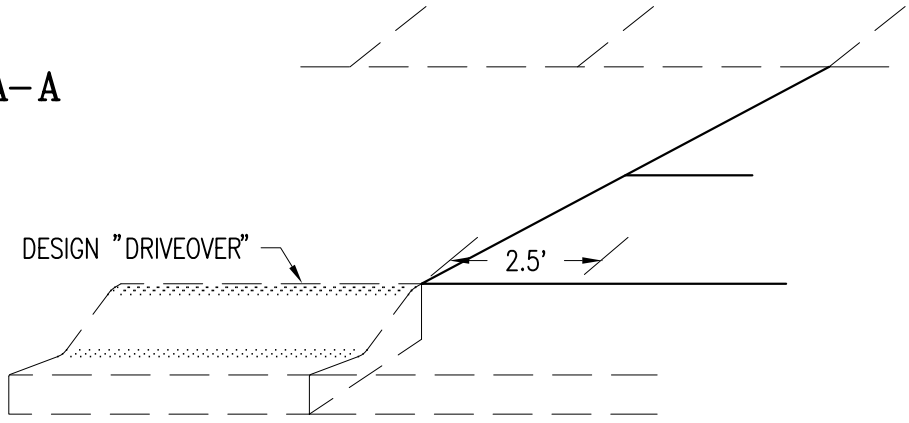
T=THICKNESS OF ENTRANCE AND SIDEWALK

NOTES

1. TRANSVERSE CONTRACTION JOINT REQUIRED WHEN "D"=10'-0" OR GREATER, PLACED AT THE CENTER OF THE APPROACH.
2. CONTRACTION JOINTS SPACED SO THAT MAX. SPACING BETWEEN JOINTS DOES NOT EXCEED 1.5 "D" OR 12' WHICHEVER IS LESS, MEASURED AT THE BACK OF CURB.
3. EDGE OF APPROACH AT SIDEWALK LINE MUST BE WITHIN THE LOT SERVED.
4. PAID FOR AS CONCRETE DRIVEWAY PAVEMENT.
5. NO DEDUCTION TO BE MADE IN CURB & GUTTER FOR ENTRANCE.
6. TAPER WING TO SIDEWALK WHEN "D" IS 15' OR LESS, OTHERWISE TAPER TO 1/2 "D".
7. EXPANSION MATERIAL TO BE PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702.



SECTION A-A



PERSPECTIVE

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CONCRETE DRIVE APPROACH TYPE C

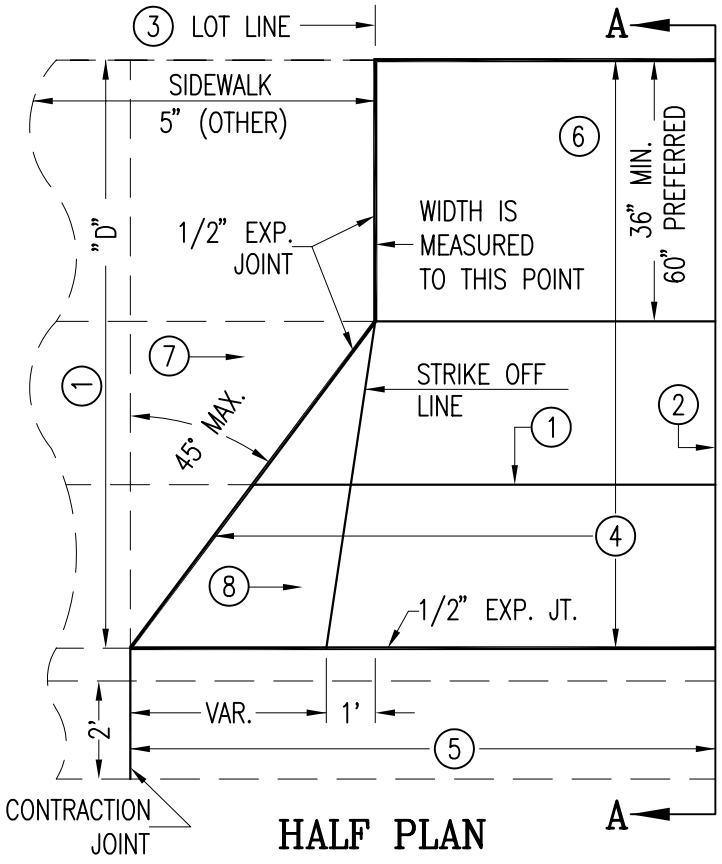
ASST. CITY ENGINEER

DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 4/16/01	PLATE NO. 2-09	REV. D

TYPE OF ENTRANCE	WIDTH	T
COMM., IND., ALLEY, R-4	12'-32'	7"

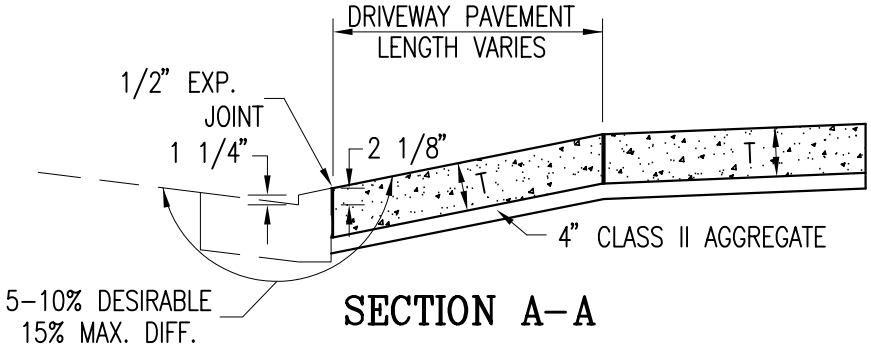
T=THICKNESS OF ENTRANCE AND SIDEWALK



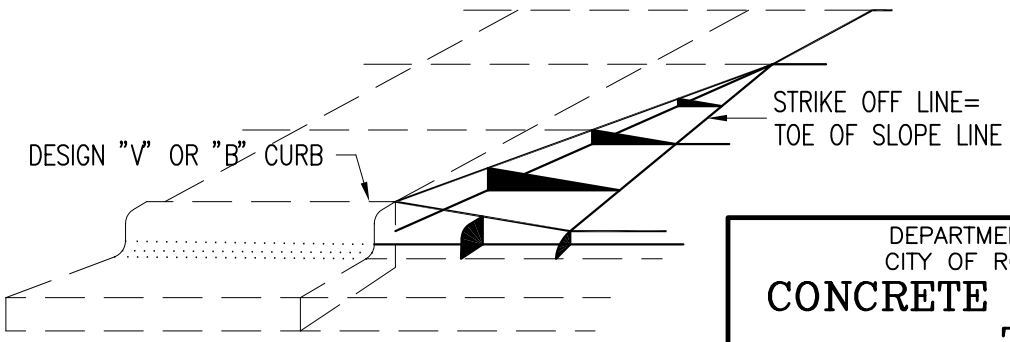
HALF PLAN

NOTES

1. TRANSVERSE CONTRACTION JOINT REQUIRED WHEN "D"=10'-0" OR GREATER, PLACED AT THE CENTER OF THE APPROACH.
2. CONTRACTION JOINTS SPACED SO THAT MAX. SPACING BETWEEN JOINTS DOES NOT EXCEED 1.5 "D" OR 12' WHICHEVER IS LESS, MEASURED AT THE BACK OF CURB.
3. EDGE OF APPROACH AT SIDEWALK LINE MUST BE WITHIN THE LOT SERVED.
4. PAID FOR AS CONCRETE DRIVEWAY PAVEMENT.
5. NO DEDUCTION TO BE MADE IN CURB & GUTTER FOR ENTRANCE.
6. CROSS SLOPE ON SIDEWALK IS TO BE 2%
7. SLOPE ADJACENT SIDEWALK AS NECESSARY, TO A MAXIMUM PITCH OF 1:20.
8. WING SLOPE IS TO HAVE A MAXIMUM PITCH OF 1:10.
9. EXPANSION MATERIAL TO BE PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702.



SECTION A-A



PERSPECTIVE

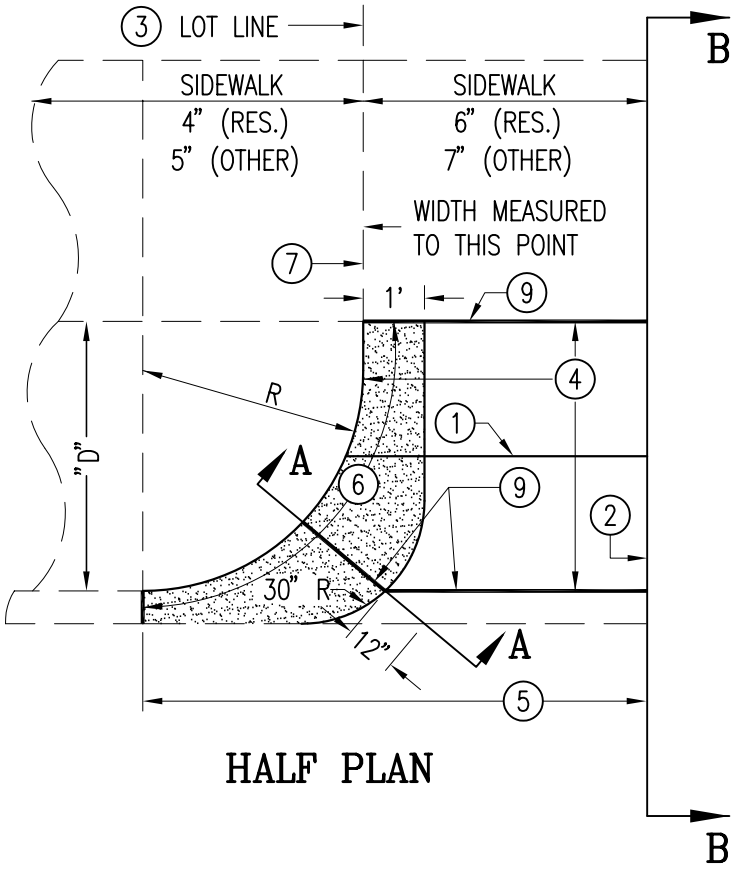
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CONCRETE DRIVE APPROACH TYPE D

Donald Nelson
ASST. CITY ENGINEER

Russell W. Fries
DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 4/16/01	PLATE NO. 2-10	REV. D

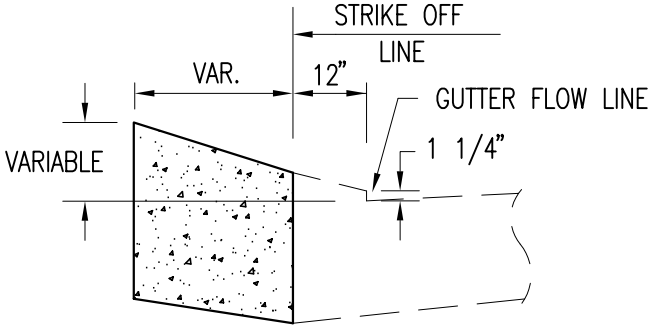


HALF PLAN

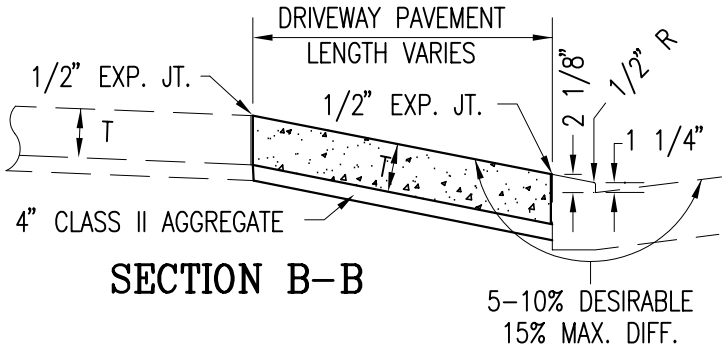
TYPE OF ENTRANCE	WIDTH	R	T
RESIDENTIAL	12'–32'	4'–6"	6"
COMM., IND., ALLEY, R–4	12'–32'	6'–6"	7"

NOTES

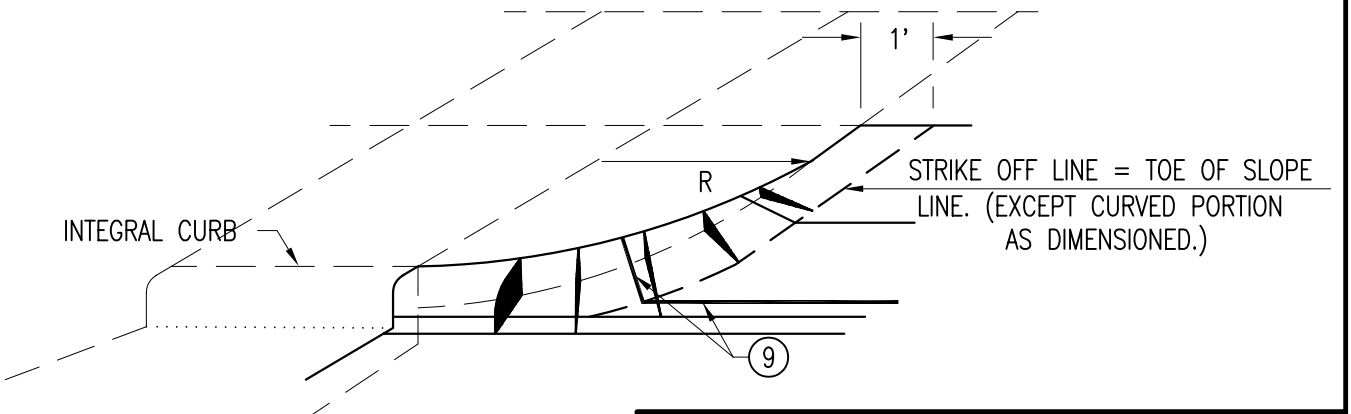
1. TRANSVERSE CONTRACTION JOINT REQUIRED WHEN "D" = 10'–0" OR GREATER, PLACED AT THE CENTER OF THE APPROACH.
2. CONTRACTION JOINTS SPACED SO THAT MAX. SPACING BETWEEN JOINTS DOES NOT EXCEED 1.5 "D" OR 12' WHICHEVER IS LESS, MEASURED AT FLOW LINE.
3. EDGE OF APPROACH AT SIDEWALK LINE MUST BE WITHIN THE LOT SERVED.
4. PAID FOR AS CONCRETE DRIVEWAY PAVEMENT.
5. NO DEDUCTION TO BE MADE IN INTEGRANT CURB AT ENTRANCE.
6. SHADED AREA INDICATES CURB TRANSITION FROM FULL EXPOSURE TO ZERO EXPOSURE.
7. CONTRACTION JOINT FOR RESIDENTIAL, 1/2" PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702 FOR OTHER.
8. 36" MINIMUM WALK WIDTH REQUIRED OUTSIDE OF DRIVE TRANSITION AREA.
9. 1/2" PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702.



SECTION A–A



SECTION B–B



PERSPECTIVE

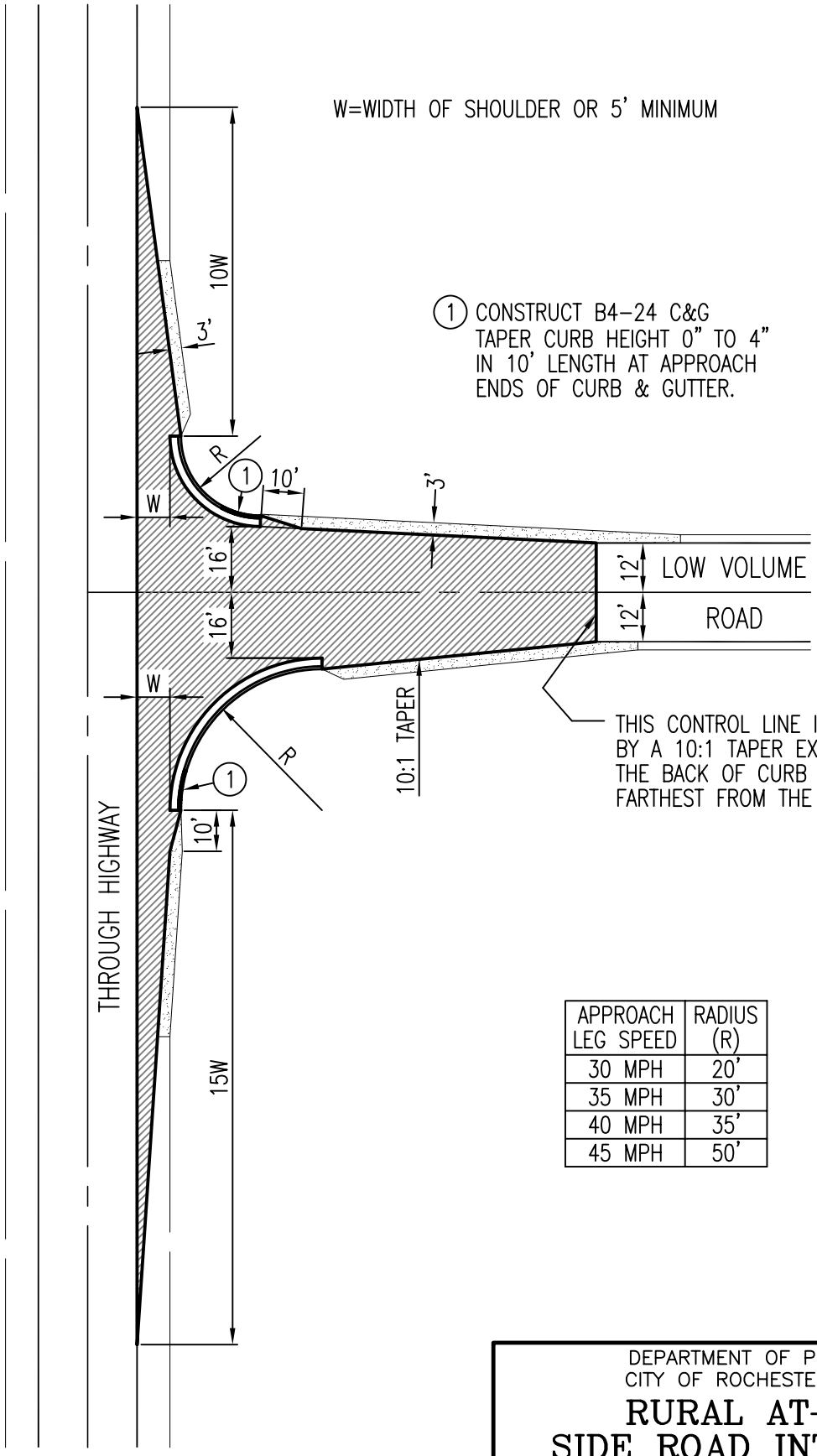
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

CONCRETE DRIVE APPROACH TYPE E

ASST. CITY ENGINEER

DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 4/16/01	PLATE NO. 2–11	REV. D



APPROACH LEG SPEED	RADIUS (R)
30 MPH	20'
35 MPH	30'
40 MPH	35'
45 MPH	50'

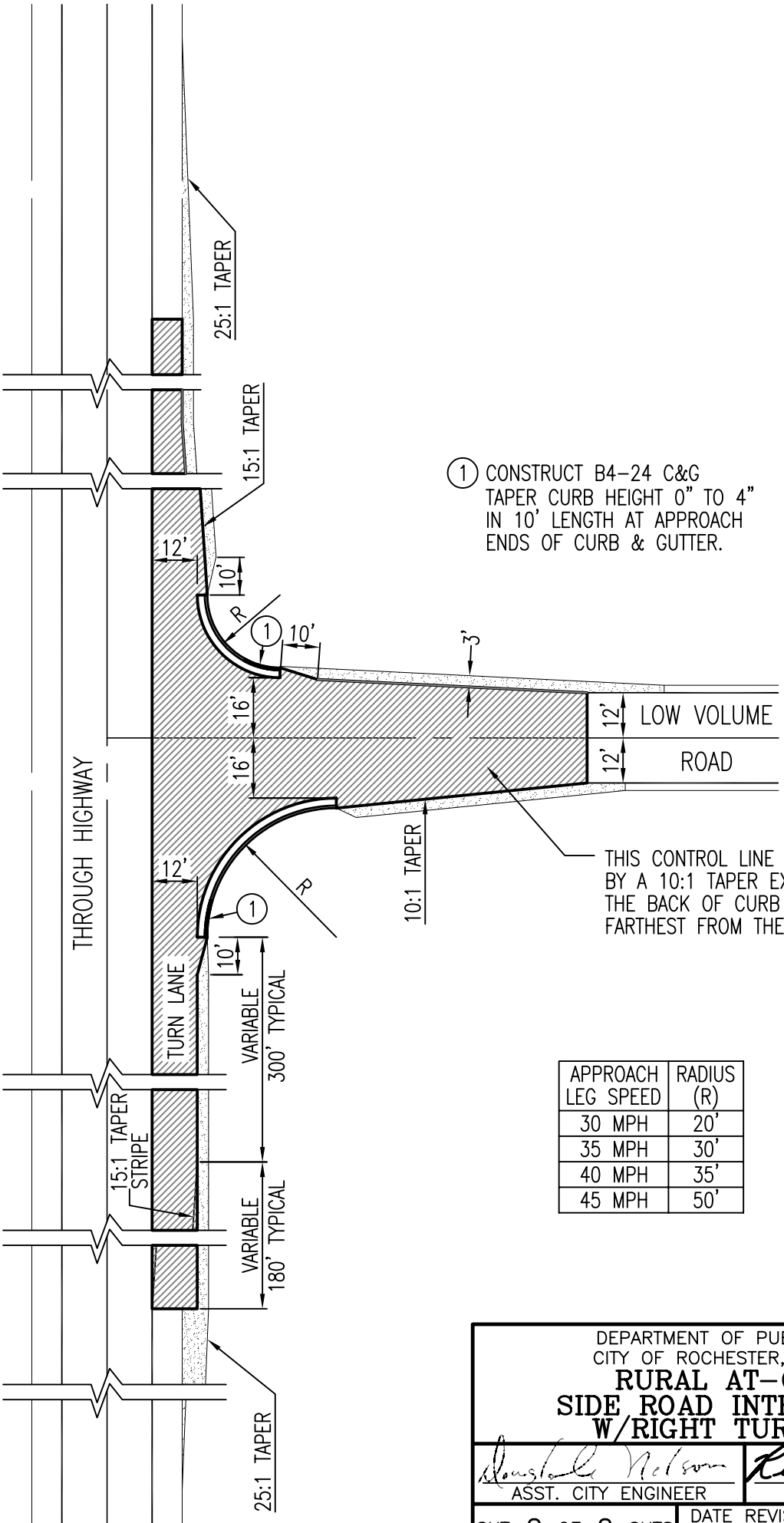
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

RURAL AT-GRADE SIDE ROAD INTERSECTION

ASST. CITY ENGINEER

DIRECTOR

SHT 1 OF 2 SHTS	DATE REVISED 3/22/06	PLATE NO. 2-12	REV. A



(1) CONSTRUCT B4–24 C&G TAPER CURB HEIGHT 0" TO 4" IN 10' LENGTH AT APPROACH ENDS OF CURB & GUTTER.

THIS CONTROL LINE IS ESTABLISHED BY A 10:1 TAPER EXTENDED FROM THE BACK OF CURB END LOCATED FARTHEST FROM THE THROUGH HIGHWAY.

APPROACH LEG SPEED	RADIUS (R)
30 MPH	20'
35 MPH	30'
40 MPH	35'
45 MPH	50'

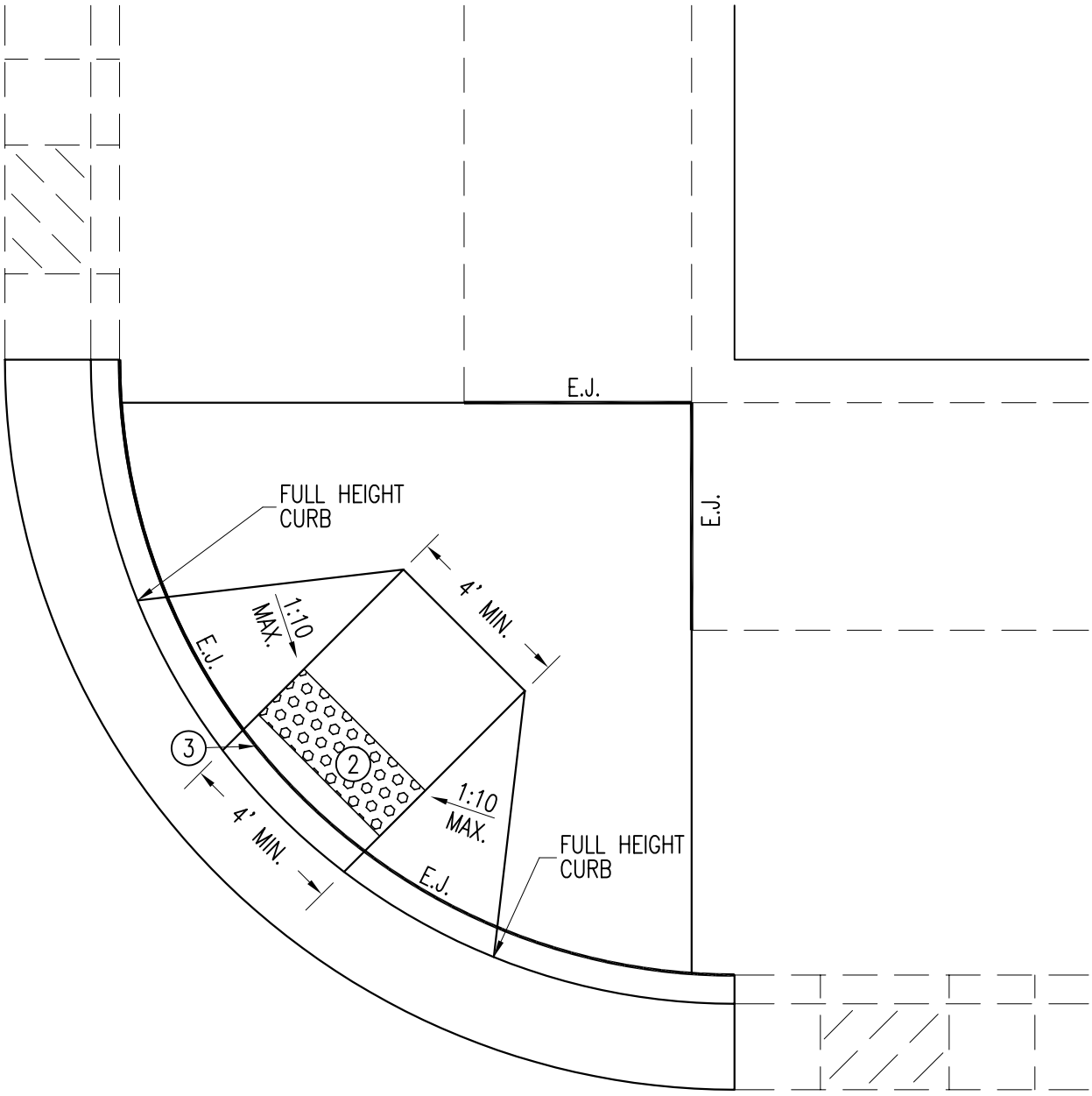
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

RURAL AT–GRADE SIDE ROAD INTERSECTION W/RIGHT TURN LANE

ASST. CITY ENGINEER

DIRECTOR

SHT 2 OF 2 SHTS	DATE REVISED 3/22/06	PLATE NO. 2–12	REV. A



NOTES

1. SEE MN/DOT PLATE NO. 7036 FOR A.D.A. REQUIREMENTS FOR SIZE, SLOPE, LOCATION AND TRUNCATED DOME AREA GUIDELINES.

(2) IF RAMP IS PAID BY SQ. FT. THEN TRUNCATED DOME AREA IS PAID IN ADDITION TO RAMP AREA.

(3) E.J. = 1/2" PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702.

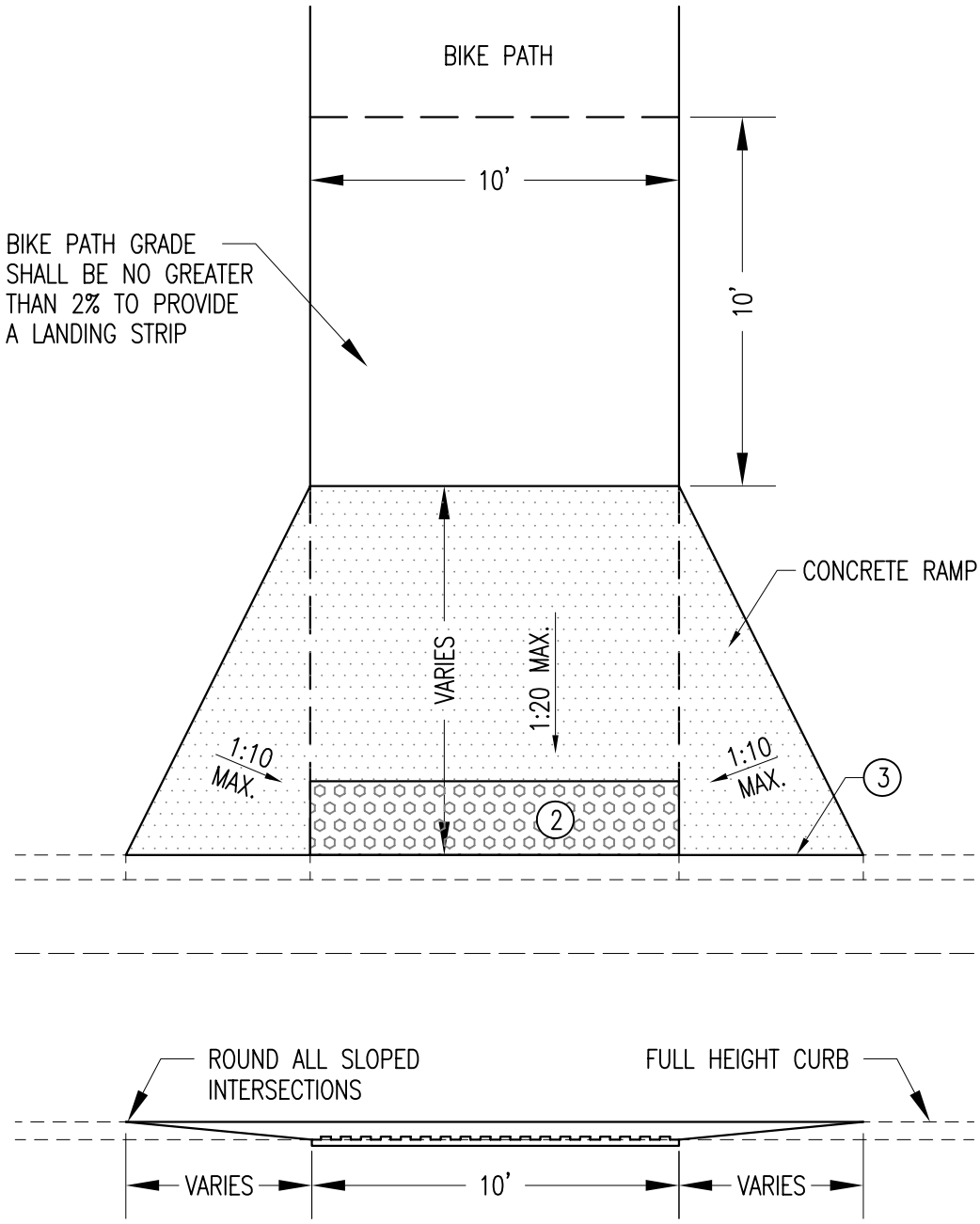
4. RAMP THICKNESS IS TO BE MIN. 6" CONCRETE– MN/DOT SPEC. MIX 3A32 WITH A MIN. OF 4" AGGREGATE BASE CLASS 2 (INCIDENTAL).

5. PRECAST TRUNCATED DOME MATERIAL SHALL BE APPROVED BY THE ENGINEER.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

PEDESTRIAN CURB RAMP

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 2 SHTS	DATE REVISED 3/22/06	PLATE NO. 2–13	REV. H	



NOTES

1. SEE MN/DOT PLATE NO. 7036 FOR A.D.A. REQUIREMENTS FOR SIZE, SLOPE, LOCATION AND TRUNCATED DOME AREA GUIDELINES.

(2) IF RAMP IS PAID BY SQ. FT. THEN TRUNCATED DOME AREA IS PAID IN ADDITION TO RAMP AREA.

(3) E.J. = 1/2" PREFORMED JOINT FILLER PER MN/DOT SPEC. 3702.

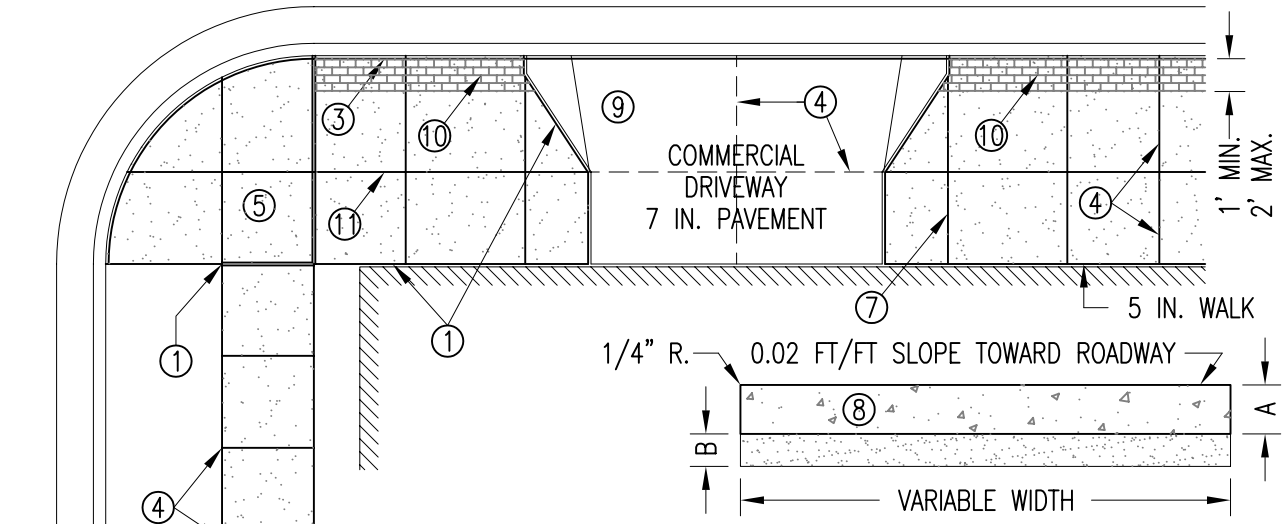
4. RAMP THICKNESS IS TO BE MIN. 6" CONCRETE– MN/DOT SPEC. MIX 3A32 WITH A MIN. OF 4" AGGREGATE BASE CLASS 2 (INCIDENTAL).

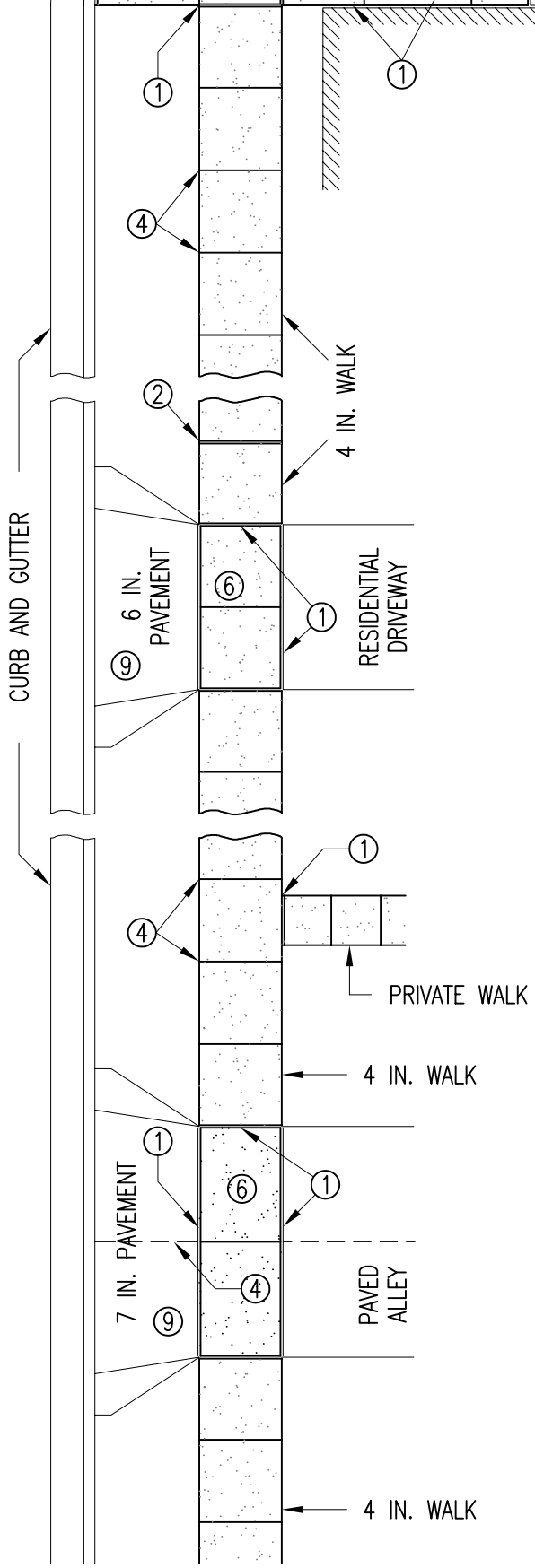
5. PRECAST TRUNCATED DOME MATERIAL SHALL BE APPROVED BY THE ENGINEER.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

BIKEWAY CURB RAMP

ASST. CITY ENGINEER	DIRECTOR			
SHT 2 OF 2 SHTS	DATE REVISED 3/22/06	PLATE NO. 2–13	REV. C	





SIDEWALK & BASE

TYPE OF SIDEWALK	A	B	
		CL 2	CL 7C
RESIDENTIAL	4"	1"	3"
RESIDENTIAL THRU DRIVE	6"	4"	6"
COMM., IND., R-4	5"	1"	3"
COMM., IND., ALLEY, R-4 THRU DRIVE	7"	4"	6"

NOTES

① 1/2 IN. PREFORMED JOINT FILLER MATERIAL. MN/DOT SPEC. 3702.

② 1/2 IN. EXPANSION JOINTS AT PROPERTY LINE AND 100 FT. (APPROX.) MAXIMUM INTERVALS.

③ SEE S.D.P. 2-02 FOR CONCRETE SILL DETAIL.

④ CONTRACTION JOINT (FORMED OR SAWED 1/3 DEPTH) SEE S.D.P. 2-07 TO 2-11 FOR PLACEMENT

⑤ SEE S.D.P. 2-13 AND PLANS FOR PLACEMENT OF PEDESTRIAN CURB RAMP.

⑥ SIDEWALK THICKNESS THRU DRIVE APPROACH IS TO BE SAME THICKNESS AS APPROACH.

⑦ PROVIDE INTERMEDIATE JOINT AT SQUARED END IN SIDEWALK, WHEN SIDEWALK IS ADJACENT TO CURB AND GUTTER.

⑧ CONCRETE-MN/DOT SPEC. MIX 3A32
BASE-CLASS II AGGREGATE (INCIDENTAL)

⑨ SEE S.D.P. 2-07 TO 2-11 FOR DRIVE APPROACH.

⑩ WALKS PLACED ABUTTING THE STREET CURB SHALL HAVE A SPECIAL DECORATIVE PATTERN AS SPECIFICALLY APPROVED BY THE CITY ENGINEER.

⑪ LONGITUDINAL JOINTS REQUIRED IF SIDEWALK WIDTH EXCEEDS 8 FEET.

12. 18" CLEAR ZONE ON BOTH SIDES OF SIDEWALK ARE TO BE FREE FROM ALL OBSTRUCTIONS.

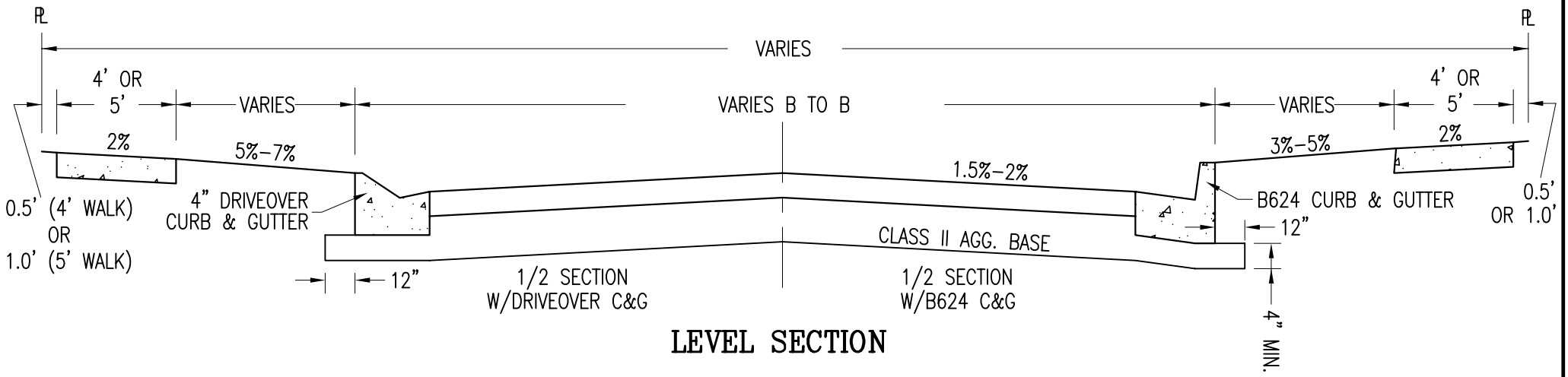
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

SIDEWALK DETAILS

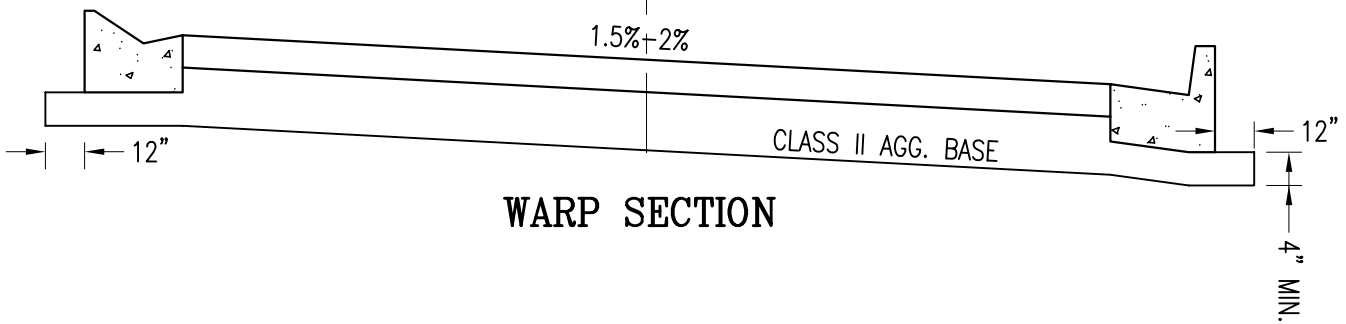
Douglas L. Nelson
ASST. CITY ENGINEER

Russell W. Fries
DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 2-14	REV. D



LEVEL SECTION



WARP SECTION

NOTES

1. 7 TON STRUCTURAL SECTIONS: STRUCTURAL SECTION G.E. 13" MIN. BITUMINOUS 4" MIN.
2. DRIVEOVER CURB & GUTTER WILL BE PERMITTED ONLY FOR ONE AND TWO FAMILY DWELLINGS WHERE DRIVEWAY LOCATIONS HAVE NOT BEEN ESTABLISHED AND STREET GRADES ARE LESS THAN 8%.
3. REFER TO ROCOG 2035 LONG RANGE TRANSPORTATION PLAN, TABLE 4–19 FOR LOCAL STREET RIGHT OF WAY AND MINIMUM ROADWAY WIDTH REQUIREMENTS.

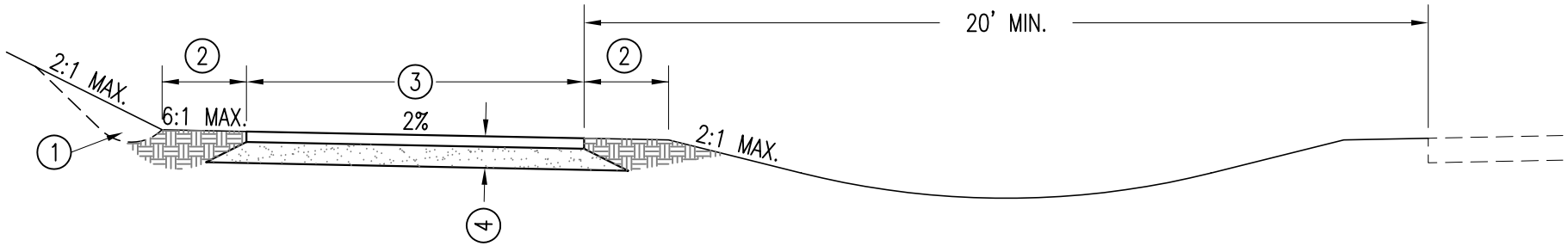
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TYPICAL SECTION ROADWAY

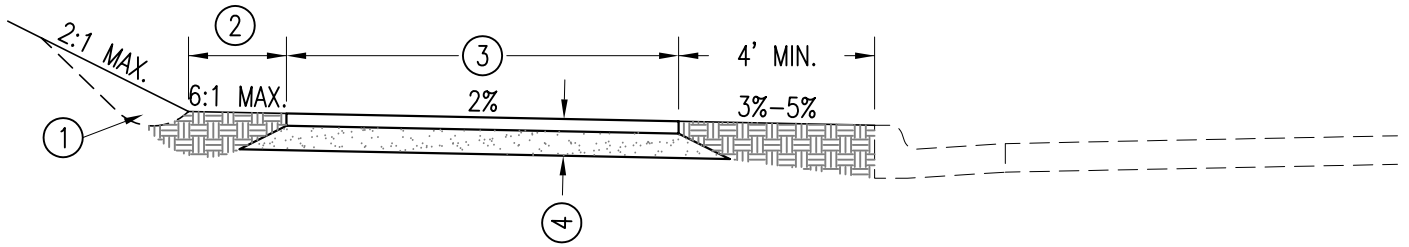
ASST. CITY ENGINEER

DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 3–01	REV. B



BIKEWAY PLACEMENT NEAR ROADS WITHOUT CURBS



BIKEWAY PLACEMENT NEAR ROADS WITH CURBS

NOTES

1. DITCH IF REQUIRED FOR DRAINAGE.
2. GRADED AREA ADJACENT TO THE PAVED SURFACE SHALL BE A MINIMUM OF 2' AND FREE OF OBSTRUCTIONS.
3. MINIMUM 10' WIDTH FOR 2 WAY TRAFFIC, (5' MINIMUM FOR 1 WAY). FOR CURVES WITH LESS THAN 50' RADIUS, PROVIDE ADDITIONAL WIDTH AS PER TABLE.
4. 2-1 1/2" LIFTS BITUMINOUS MN/DOT SPEC. 2350 & 6" CLASS II AGGREGATE BASE TYPICAL.

RADIUS	ADDITIONAL PAVED WIDTH
0-25	2'
25-50	1'

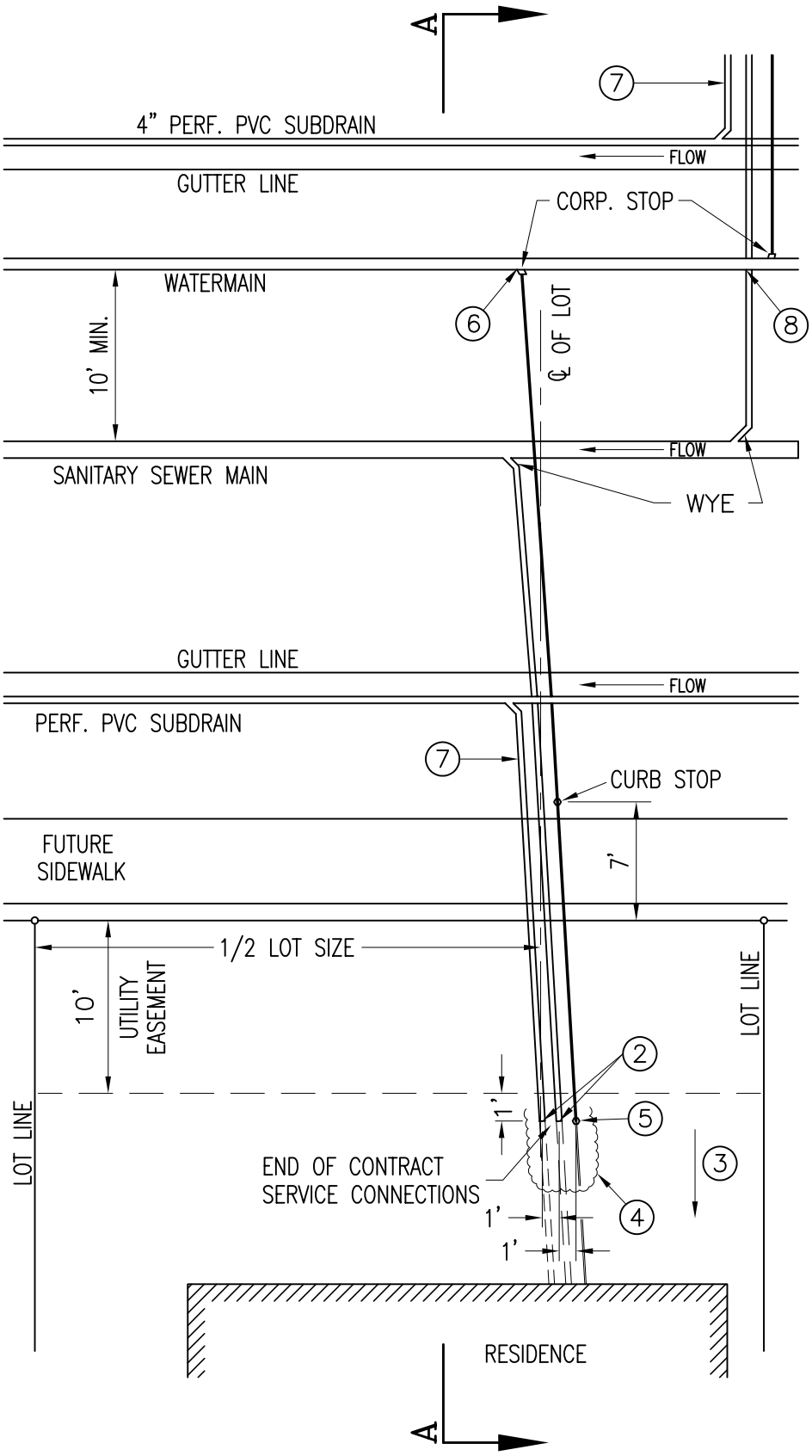
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TYPICAL SECTION OFF-ROAD BIKEWAY

ASST. CITY ENGINEER

DIRECTOR

SHT	DATE REVISED	PLATE NO.	REV.
1 OF 1 SHTS	3/22/06	3-02	C



NOTES

1. FINAL RECORD OF SERVICE LOCATIONS: END OF SEWER, WATER & SUBDRAIN SERVICES SHALL BE REFERRED TO LOT CORNER AND PROPERTY LINE. SHOW INV. ELEV. AND FINISHED GRADE OF SEWER AND UNDERGROUND SERVICES AND DISTANCE FROM LOT CORNER TO SEWER SERVICE. ALSO SHOW DIM. BETWEEN END OF SEWER SERVICE AND ENDS OF WATER AND UNDERGROUND DRAIN SERVICE.
2. PLUG END OF UNDERGROUND SERVICES. PLACE 4"x4" WOOD POST, EXTENDING ONE FOOT ABOVE GRADE.
3. FUTURE EXTENSION OF SERVICES BY OTHERS
4. WHEN INSTALLED IN SOLID ROCK, BLAST 4' BEYOND END OF PIPE FOR FUTURE CONNECTION.
5. REFER TO S.D.P. 4-01 SHEET 2 FOR WATER SERVICE TEMPORARY CAP DETAIL.
6. REFER TO S.D.P. 6-11 FOR ADDITIONAL WATER SERVICE DETAIL
7. REFER TO S.D.P. 1-08 FOR ADDITIONAL SUBDRAIN DETAIL
8. SEWER SERVICE CONNECTIONS ON SAME SIDE AS WATERMAIN SHOULD BE PLACED BELOW WATERMAIN.

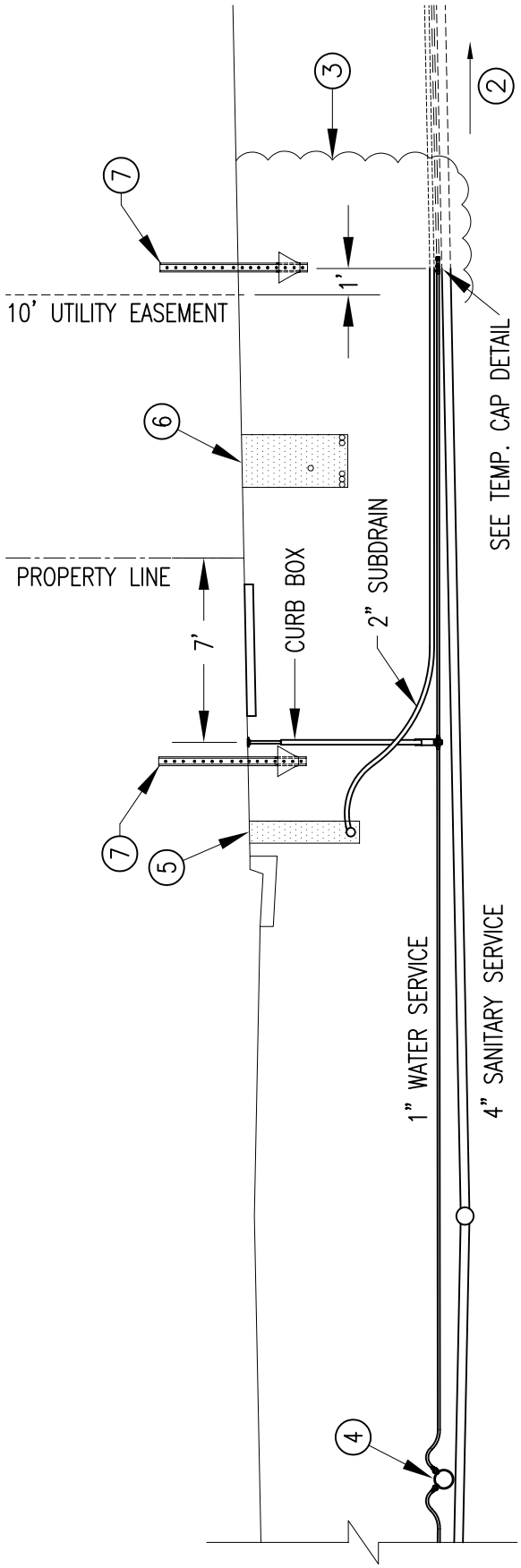
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

SERVICE CONNECTIONS STUBBED INTO PROPERTY

Douglas G. Nelson
ASST. CITY ENGINEER

Russell W. Fries
DIRECTOR

SHT 1 OF 2 SHTS	DATE REVISED 3/22/06	PLATE NO. 4-01	REV. E



NOTES

1. TO DETERMINE ELEVATION OF END OF SEWER SERVICE: USING TOP OF INSIDE OF MAIN AT WYE, BEGIN 2% GRADE (APPROX. 1/4" PER FT.) IF DEPTH OF INVERT AT END OF SERVICE IS GREATER THAN 8.5' BELOW FINISH BOULEVARD GRADE, INCREASE GRADIENT. FINAL DEPTH OF SEWER SERVICE LESS THAN 8' BELOW FINISH BOULEVARD GRADE SHALL BE REVIEWED AND APPROVED BY CITY ENGINEER.

(2) FUTURE EXTENSION OF SERVICES BY OTHERS.

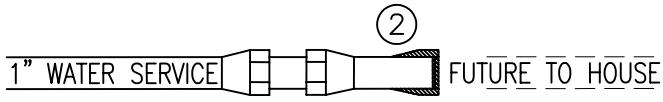
(3) WHEN INSTALLED IN SOLID ROCK, BLAST 4' BEYOND END OF PIPE FOR FUTURE CONNECTION.

(4) REFER TO S.D.P. 6-11 FOR ADDITIONAL WATER SERVICE DETAIL.

(5) REFER TO S.D.P. 1-08 FOR ADDITIONAL SUBDRAIN DETAIL.

(6) REFER TO S.D.P. 4-03 FOR ADDITIONAL UTILITY SERVICE DETAIL.

(7) INSTALL EITHER 4"x4" WOOD POST OR METAL SIGN POST MIN. ONE FOOT ABOVE GRADE TO MARK AND PROTECT LOCATION.



TEMPORARY CAP DETAIL

1. INSTALL COMPRESSION COUPLER AND CAP. TEST MAIN WITH CURB STOP IN OPEN POSITION.

(2) TEMPORARY CAP ASSEMBLY CONSISTS OF 1" SOLDER BUSHING, COPPER DISC, AND 3" COPPER TUBE (FORD SLP-4) OR APPROVED EQUAL.

3. REMOVE TEMPORARY CAP AND CONNECT INTO COUPLER WHEN HOUSE CONNECTION IS MADE.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

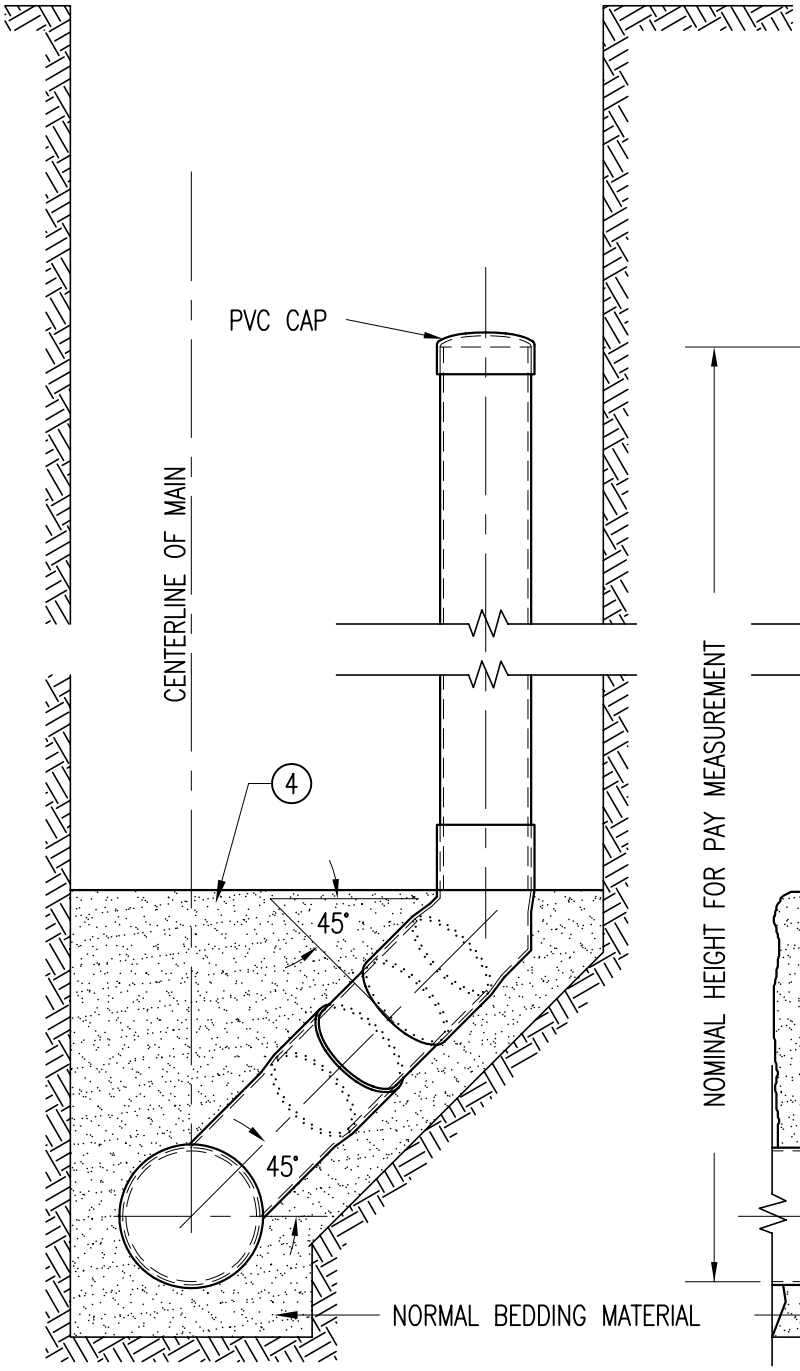
SECTION A-A
SERVICE CONNECTIONS

ASST. CITY ENGINEER	DIRECTOR			
SHT 2 OF 2 SHTS	DATE REVISED 3/22/06	PLATE NO. 4-01	REV. A

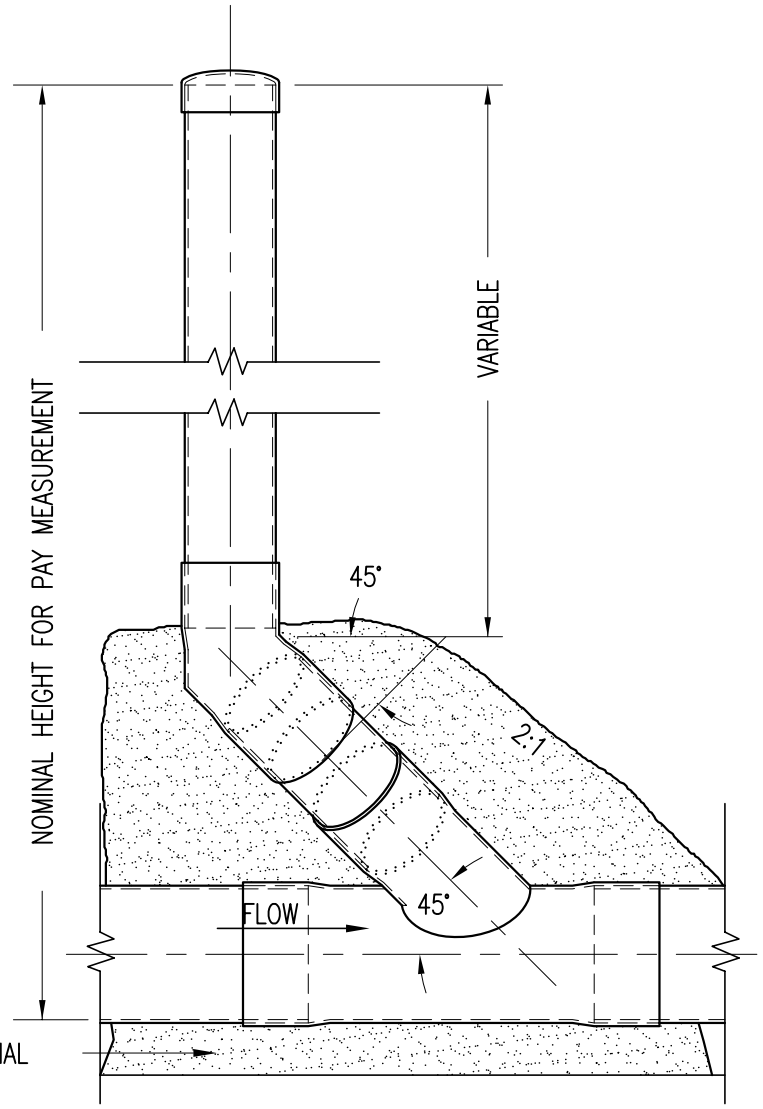
NOTES

1. THE BID PRICE TO CONSTRUCT RISER SHALL INCLUDE ALL COSTS AND MATERIALS FOR WYE BRANCH IN MAIN, BEND, RISER PIPE, MORTAR, AND INSTALLATION.
2. PVC PIPE FOR RISER CONSTRUCTION SHALL BE OF THE SAME A.S.T.M. DESIGNATION AS THE MAIN UNLESS OTHERWISE SPECIFIED.
3. RISER SHALL BE ALLOWED ONLY ON 4" SERVICE LINES.

(4) FURNISH AND COMPACT BEDDING MATERIAL TO COMPLETELY FILL TRENCH TO THE DEPTH OF THE 45° BEND AS SHOWN.



END ELEVATION

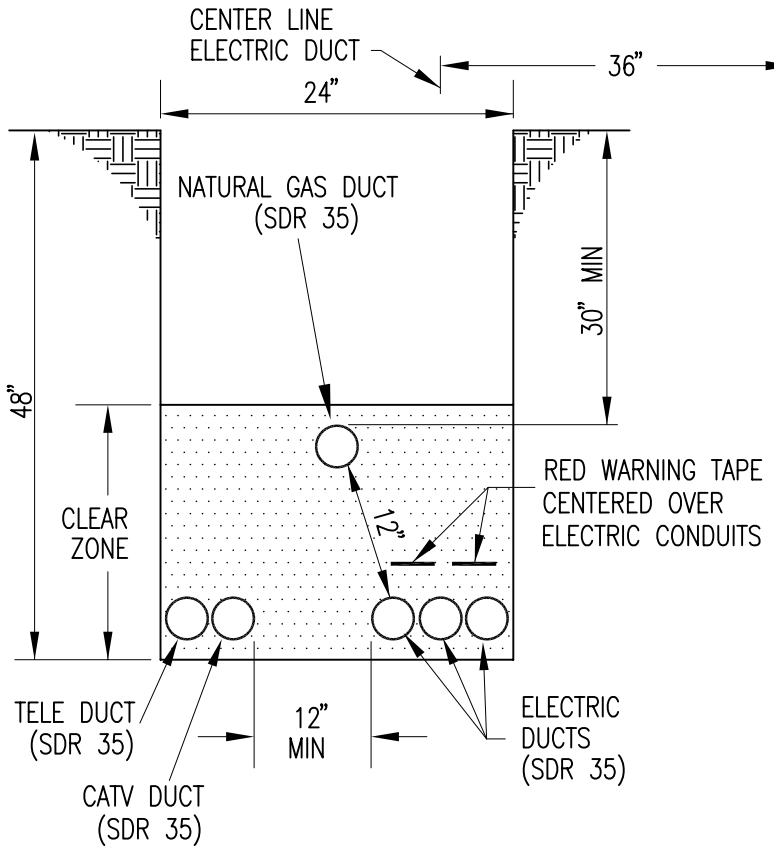


SIDE ELEVATION

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STANDARD 4IN. RISER

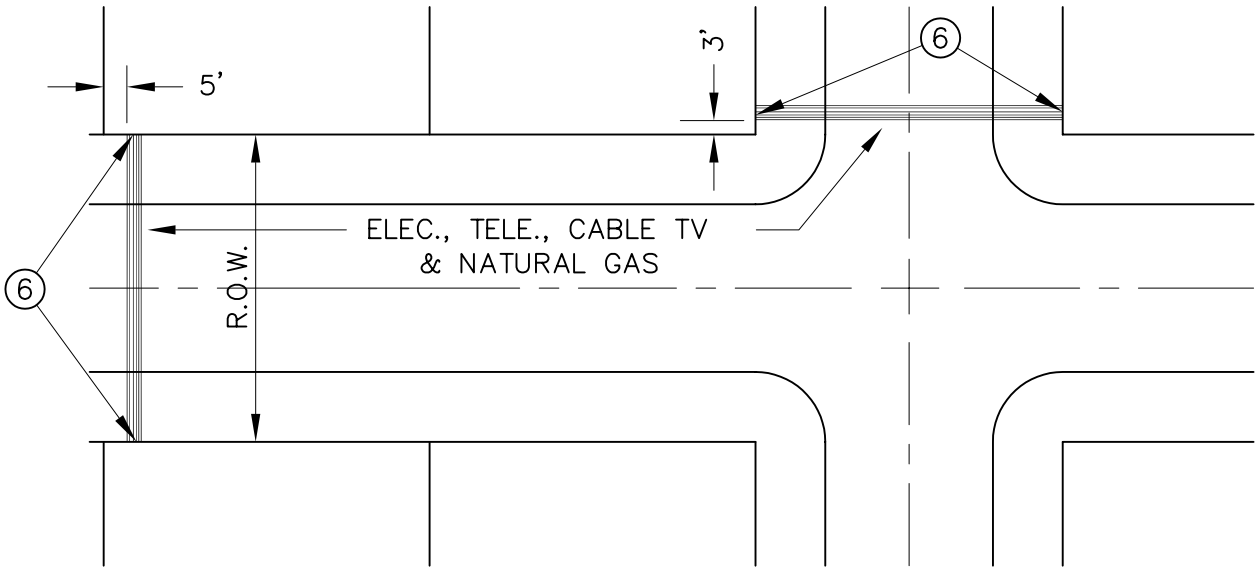
ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 4–02	REV. A



NOTES

1. CLEAR ZONE SHALL NOT CONTAIN BACKFILL GRANULAR MATERIAL LARGER THAN 1/4" IN DIAMETER.
2. TRENCH BED SHALL BE OF A SMOOTH, UNIFORM GRADE, COMPACTED, AND FREE OF STONES OR PROTRUSIONS LARGER THAN 1/4". UNSUITABLE TRENCH BEDS SHALL RECEIVE A 2" COMPACTED LAYER OF "CLEAR ZONE" BACKFILL PRIOR TO CONDUIT PLACEMENT.
3. ELECTRIC DUCT TO BE NEAREST DUCT TO PROPERTY LINE.
4. CONDUIT END CAP COLORS ARE:
   RPU–RED
   CABLE TV–PINK
   NW BELL TELE–BLAZE ORANGE
   NATURAL GAS–YELLOW
5. CONDUIT NEEDING SURFACE ACCESS SHALL BE DONE SO BY USING LONG SWEEP BENDS.

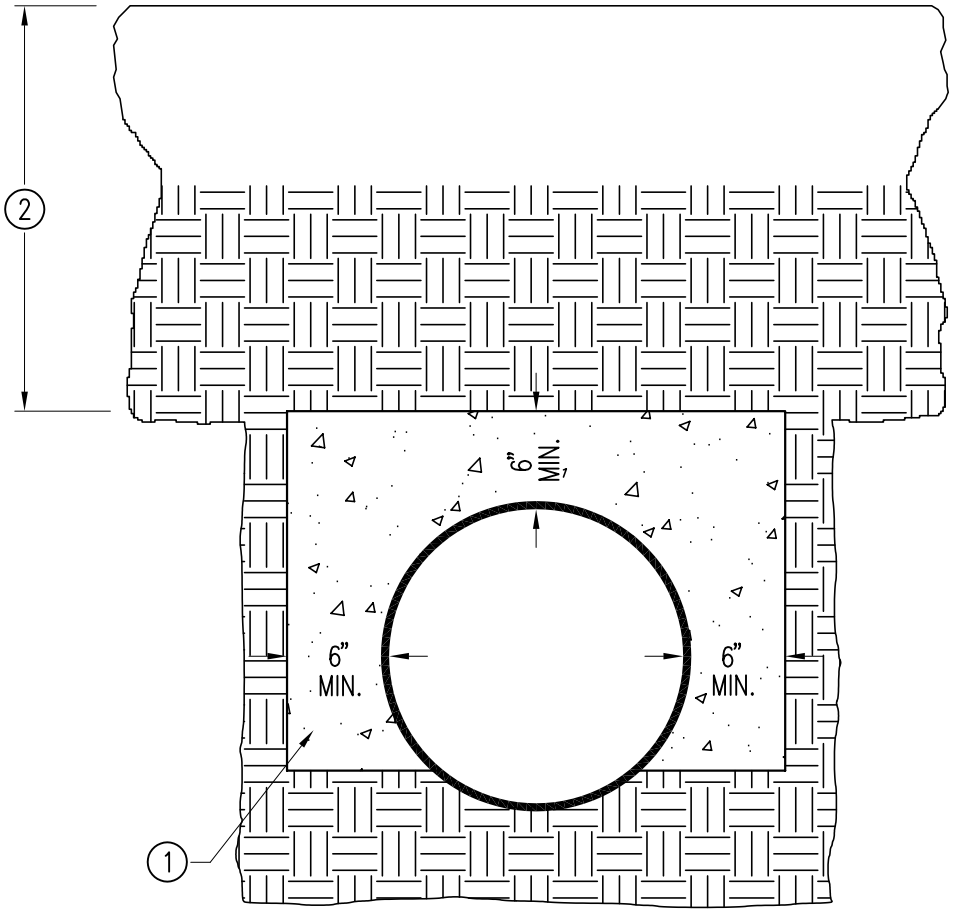
⑥ A 4"x4" WOODEN POST, EXTENDING ONE FOOT ABOVE GRADE, SHALL BE PLACED BY THE UTILITY CROSSING CONDUITS TO MARK THEIR LOCATION.



DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

STREET CROSSINGS FOR UTILITY CONDUITS

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 4/1/04	PLATE NO. 4–03	REV. B



NOTES

1. INSULATION CONCRETE SHALL BE PAID FOR AT THE PRICE BID PER CU. YARD.
2. CONCRETE CAP IS REQUIRED WHERE HEIGHT OF COVER IS 4 FEET OR LESS AND PIPE IS LOCATED IN ROADWAY.

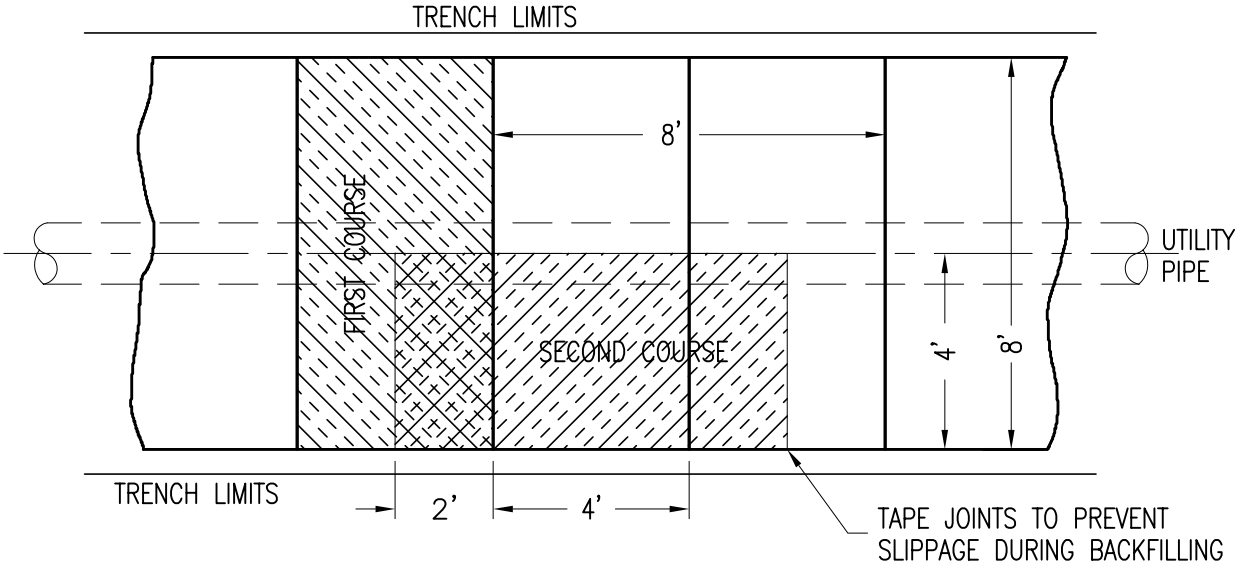
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

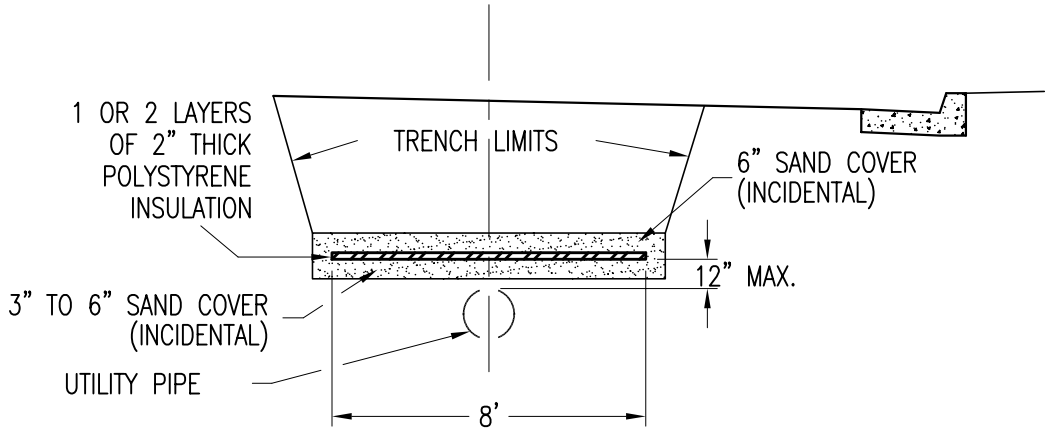
CONCRETE INSULATION AND PROTECTION FOR UNDERGROUND PIPE

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 1/1/00	PLATE NO. 5-01	REV. B	

INSULATION REQUIREMENTS

DEPTH ④	SAN. SEWER	WATER-MAIN ②
4'-5'	4"	4"
5'-7'	2"	2"
>7'	0	0





TYPICAL LAYOUT FOR POLYSTYRENE INSULATION

NOTES

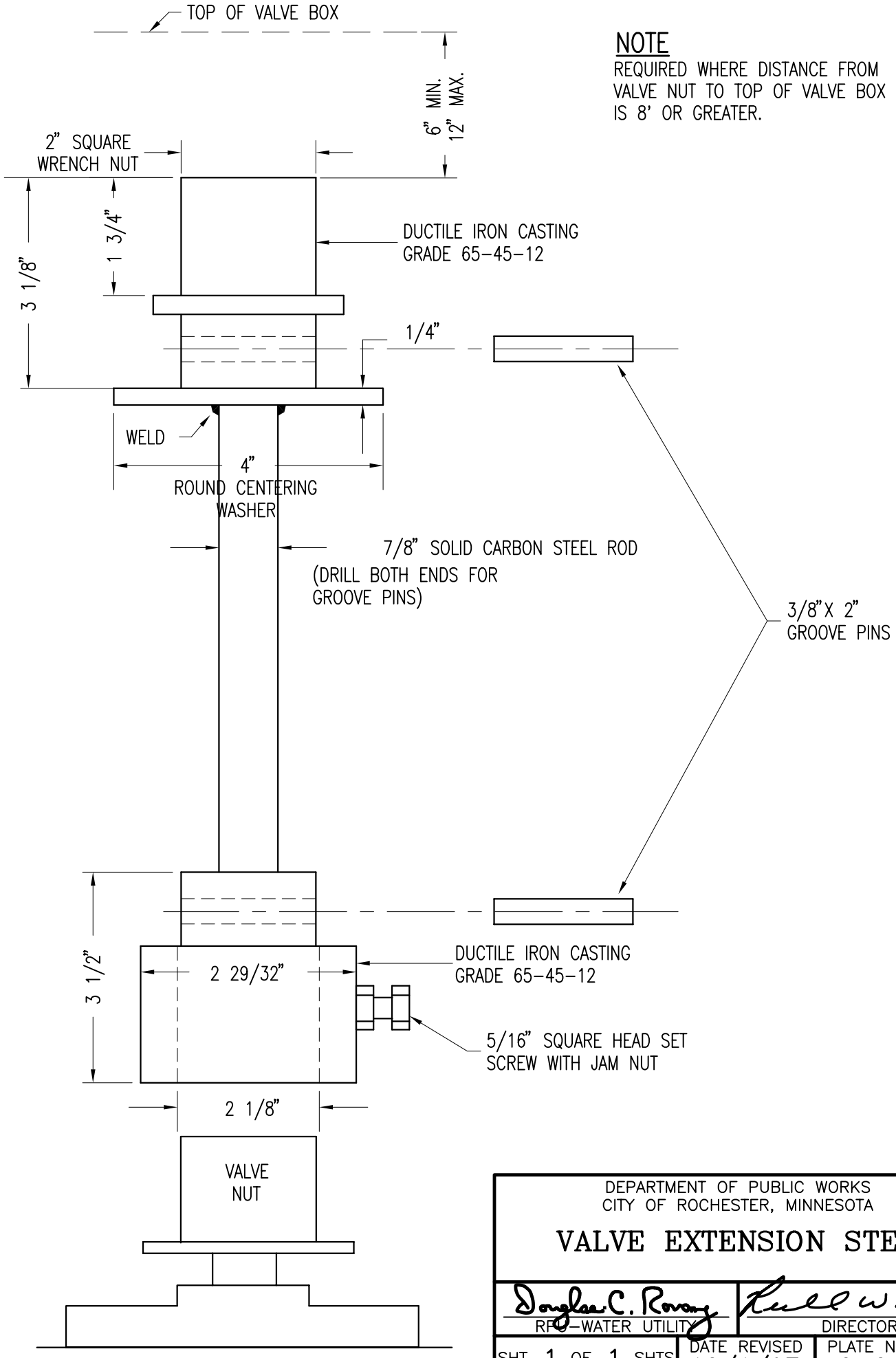
1. INSULATION BOARD SHALL BE AS PER MN/DOT SPEC. 3760.
2. FOR WATERMAIN WITH NO SERVICE CONNECTIONS OR FOR WATERMAIN OUTSIDE OF PAVED AREAS WHERE SNOW IS NOT REMOVED, NO INSULATION IS REQUIRED IF COVER IS AT LEAST 6'.
3. INSULATION BOARD SHALL BE PAID FOR AS 2503.604 2" INSULATION AT THE PRICE BID PER SQ. YD.
4. DEPTH FOR SANITARY AND STORM SHALL BE TO INVERT. DEPTH FOR WATERMAIN SHALL BE TO TOP OF PIPE. LESS THAN 4' REQUIRES CONCRETE INSULATION. SEE S.D.P. 5-01.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

POLYSTYRENE INSULATION

ASST. CITY ENGINEER | DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 5-02	REV. D



NOTE

REQUIRED WHERE DISTANCE FROM VALVE NUT TO TOP OF VALVE BOX IS 8' OR GREATER.

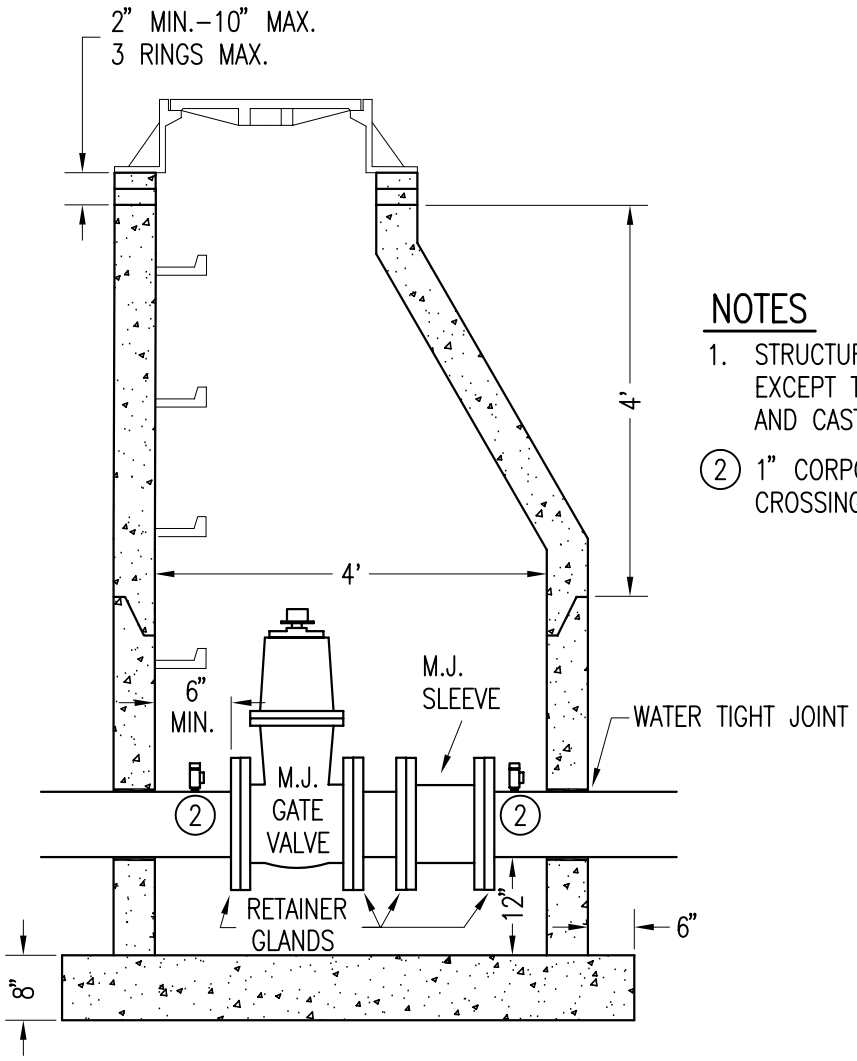
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

VALVE EXTENSION STEM

Douglas C. Rovang
RPU-WATER UTILITY

Russell W. Fries
DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 10/1/97	PLATE NO. 6-01	REV. A

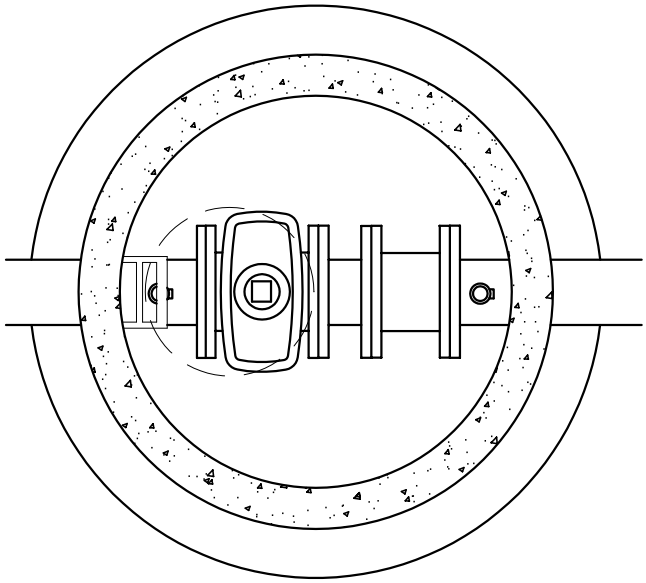


SIDE VIEW

NOTES

1. STRUCTURE SHALL BE PER S.D.P. 1–02 EXCEPT THAT CONE SHALL BE ECCENTRIC AND CASTING CENTERED OVER VALVE.

(2) 1" CORPORATION WHEN USED AT RIVER CROSSING.



TOP VIEW

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

VALVE MANHOLE

Douglas C. Rovang
RPU–WATER UTILITY

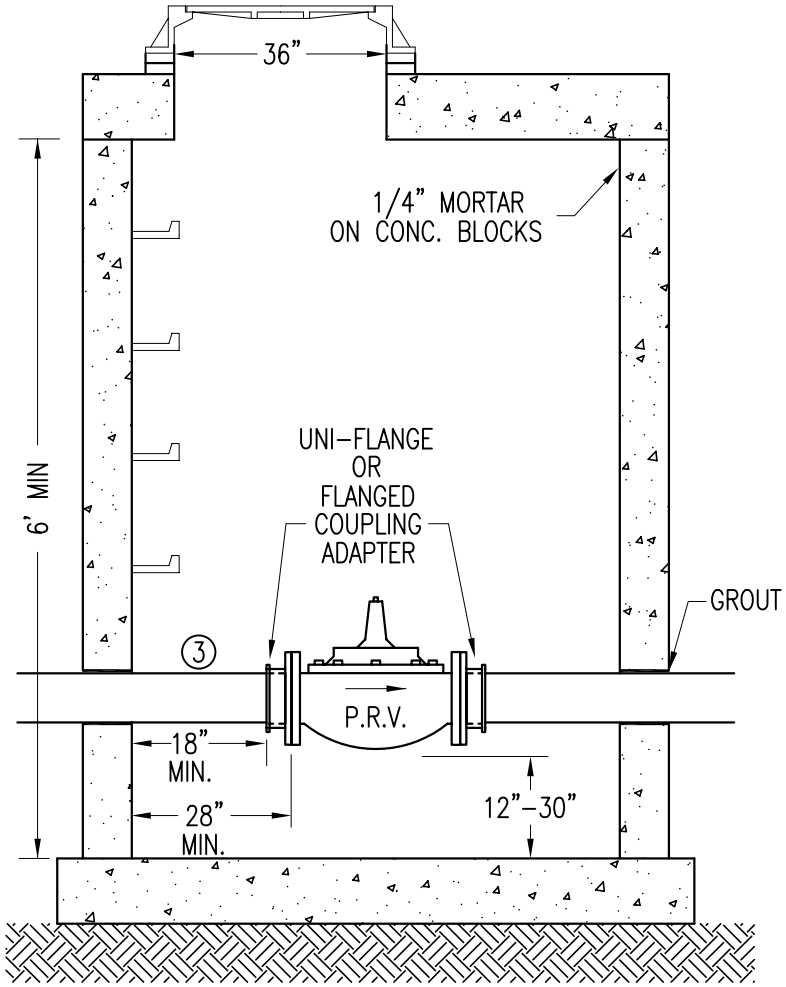
Russell W. Fries
DIRECTOR

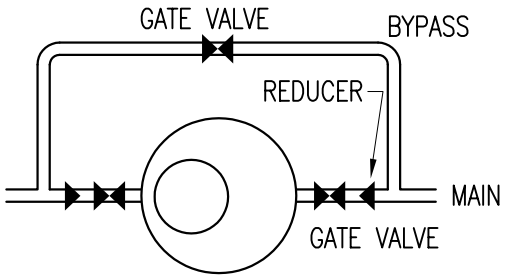
SHT 1 OF 1 SHTS	DATE REVISED 4/16/01	PLATE NO. 6–02	REV. B

NOTES

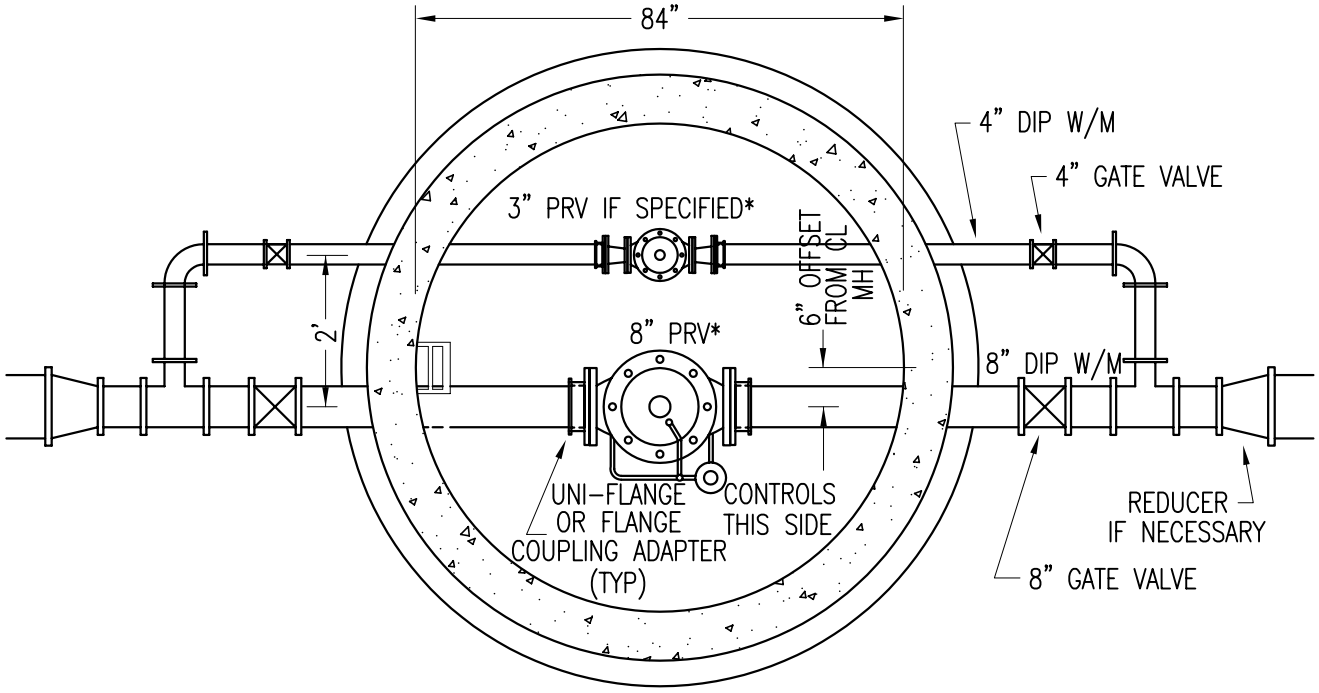
1. STRUCTURE SHALL BE AS PER S.D.P. 1–04.
2. P.R.V.'(S) TO BE FURNISHED BY ROCHESTER PUBLIC UTILITIES AND INSTALLED BY THE CONTRACTOR.

③ UNI–FLANGE OR FLANGED COUPLING ADAPTER ON THE HIGH PRESSURE SIDE OF THE P.R.V. SHALL BE RESTRAINED PER S.D.P. 6–05.





BYPASS
(NECESSARY FOR SINGLE PRV INSTALLATION ONLY)



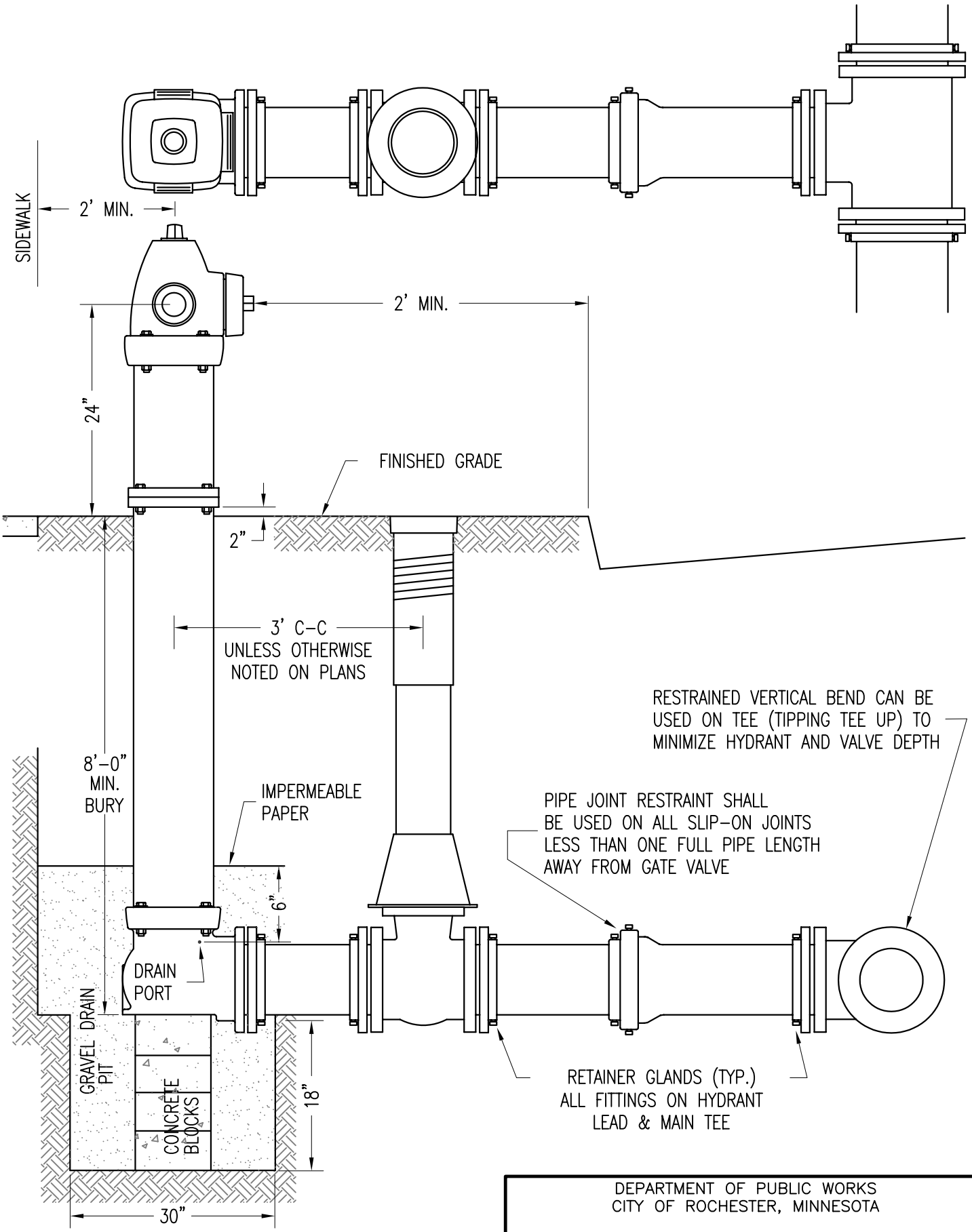
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

PRESSURE REDUCING VALVE MANHOLE

Douglas C. Rovang
RPU–WATER UTILITY

Russell W. Fries
DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 6–03	REV. C



NOTE

CARE MUST BE TAKEN NOT TO PLUG THE HYDRANT DRAIN PORT WITH CONCRETE. DRAIN PORTS TO BE PLUGGED IF REQUIRED BY SPECIAL PROVISIONS.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

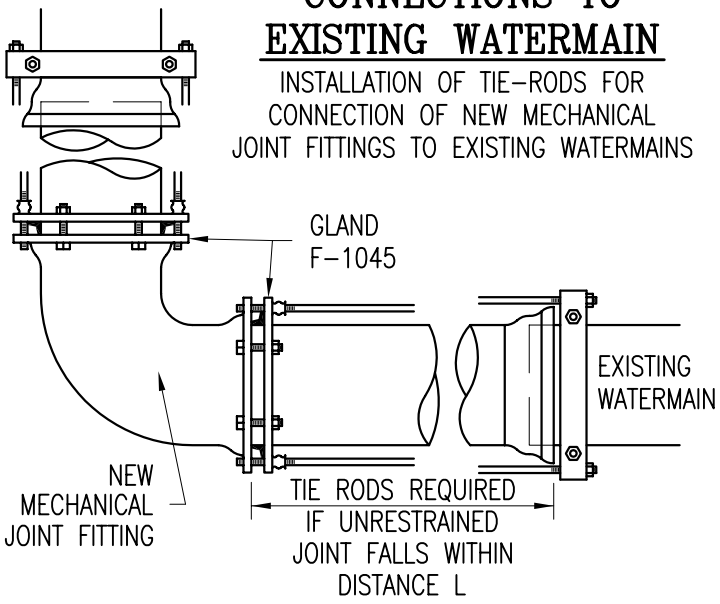
HYDRANT BRANCH DETAIL

RPU–WATER UTILITY	DIRECTOR

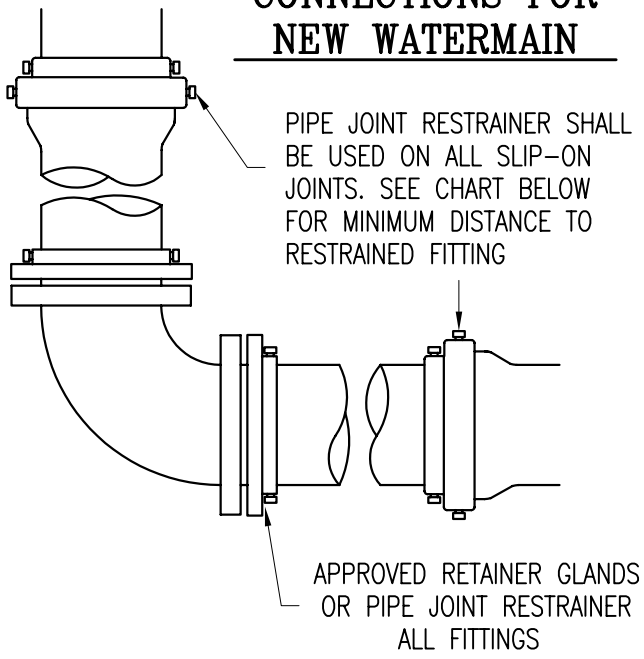
SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 6–04	REV. C

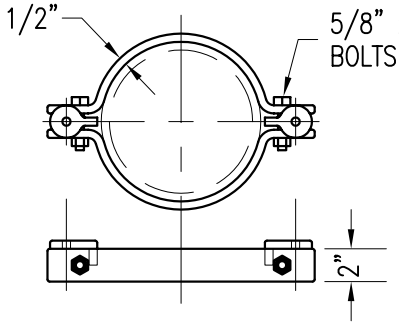
CONNECTIONS TO EXISTING WATERMAIN

INSTALLATION OF TIE-RODS FOR CONNECTION OF NEW MECHANICAL JOINT FITTINGS TO EXISTING WATERMAINS



CONNECTIONS FOR NEW WATERMAIN





SOCKET CLAMP FOR PIPE FITTINGS

NUMBER OF 3/4" RODS REQUIRED

PIPE SIZE INCHES	12" AND LESS	14" AND 16"	18" AND 20"	24"
NUMBER OF RODS	2	4	6	8

MINIMUM DISTANCE TO CLOSEST UNRESTRAINED JOINT (L IN FEET)

TYPE OF FITTING	PIPE SIZE							
	6"	8"	10"	12"	14"	16"	18"	20"
11 1/4° BEND	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
22 1/2° BEND	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
45° BEND	18.0	18.0	18.0	18.0	19.0	21.4	23.8	26.0
90° BEND	19.6	19.6	24.0	28.2	32.4	36.6	40.8	44.8
TEE	18.0	18.0	18.0	18.0	20.0	25.0	36.0	40.0
PLUG	18.0	18.0	18.0	18.0	20.0	25.0	36.0	40.0

NOTES

1. RODS TO BE GALVANIZED.

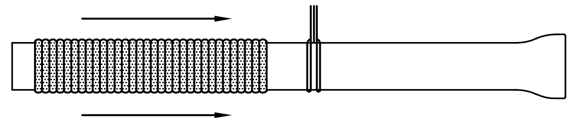
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

RESTRAINED JOINT DETAIL

Douglas C. Rovang — RPE-WATER UTILITY

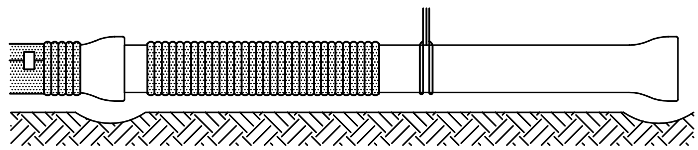
Russell W. Fries — DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 6-05	REV. C



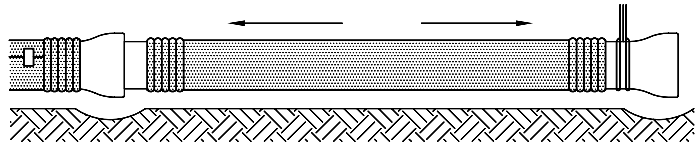
STEP 1

CUT A SECTION OF POLYETHYLENE TUBE APPROX. 2' LONGER THAN THE PIPE, REMOVE ALL MATERIAL THAT MIGHT HAVE ACCUMULATED ON THE PIPE SURFACE DURING STORAGE. SLIP THE TUBE AROUND THE PIPE. BUNCH THE TUBE ACCORDION-FASHION ON THE END OF THE PIPE. PULL BACK THE END OF THE TUBE UNTIL IT CLEARS THE PIPE END.



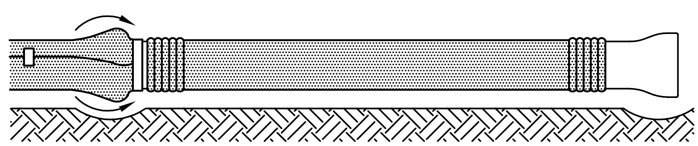
STEP 2

DIG A SHALLOW BELL HOLE IN THE TRENCH BOTTOM. LOWER THE PIPE INTO THE TRENCH AND MAKE UP THE PIPE JOINT WITH THE PRECEDING SECTION OF PIPE.



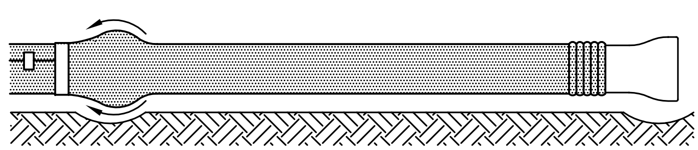
STEP 3

LIFT THE PIPE SLIGHTLY TO PROVIDE ENOUGH CLEARANCE TO EASILY SLIDE THE TUBE. NOTE: MAKE SURE THAT NO DIRT OR OTHER BEDDING MATERIAL BECOMES TRAPPED BETWEEN THE WRAP AND THE PIPE.



STEP 4

MAKE THE OVERLAP BY PULLING BACK THE BUNCHED POLYETHYLENE AND SECURING IT IN PLACE. NOTE: THE POLYETHYLENE MAY BE SECURED IN PLACE BY USING TAPE, STRING, OR ANY OTHER MATERIAL CAPABLE OF HOLDING IT SNUGLY AGAINST THE PIPE.



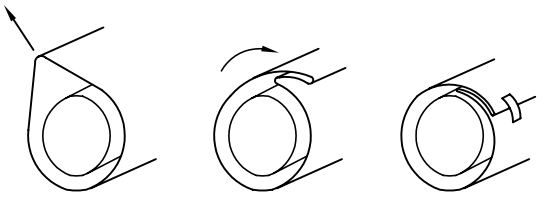
STEP 5

OVERLAP THE SECURED TUBE END WITH THE TUBE END OF THE NEW PIPE SECTION. SECURE THE NEW TUBE END IN PLACE.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

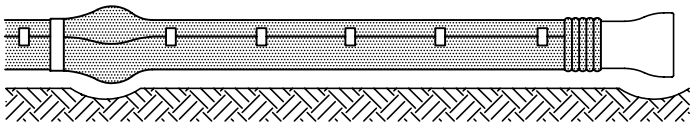
POLYETHYLENE ENCASEMENT

RPU-WATER UTILITY		DIRECTOR	
SHT 1 OF 2 SHTS	DATE REVISED 10/1/97	PLATE NO. 6-06	REV. A



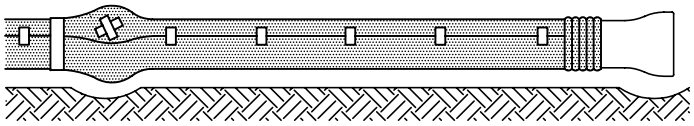
STEP 6

TAKE UP THE SLACK ALONG THE BARREL OF THE PIPE TO MAKE A SNUG, BUT NOT TIGHT, FIT. FOLD EXCESS BACK OVER THE TOP OF THE PIPE.



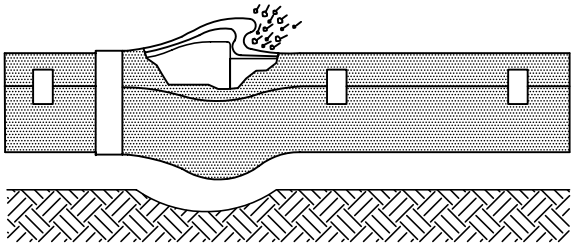
STEP 7

SECURE THE FOLD AT SEVERAL LOCATIONS ALONG THE PIPE BARREL (APPROXIMATELY EVERY 3').



STEP 8

REPAIR SMALL RIPS, TEARS, OR OTHER TUBE DAMAGE WITH ADHESIVE TAPE.



STEP 9

TO PREVENT DAMAGE DURING BACKFILLING, ALLOW ADEQUATE SLACK IN THE TUBE AT THE JOINT. AVOID DAMAGING THE POLYETHYLENE WHEN USING TAMPING DEVICES.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

POLYETHYLENE ENCASEMENT

Douglas C. Rovang	Russell W. Fries
RPU–WATER UTILITY	DIRECTOR

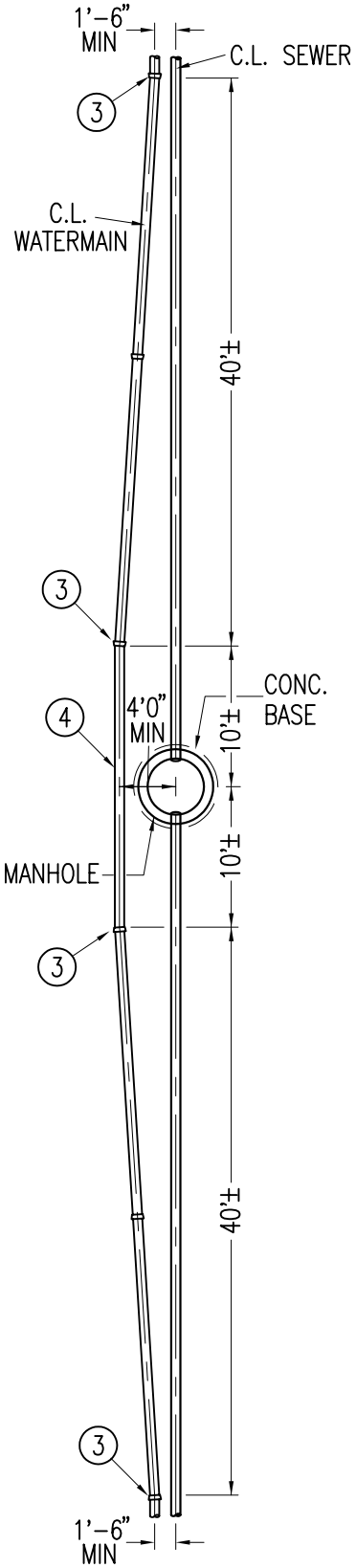
SHT 2 OF 2 SHTS	DATE REVISED 10/1/97	PLATE NO. 6–06	REV. A

NOTES

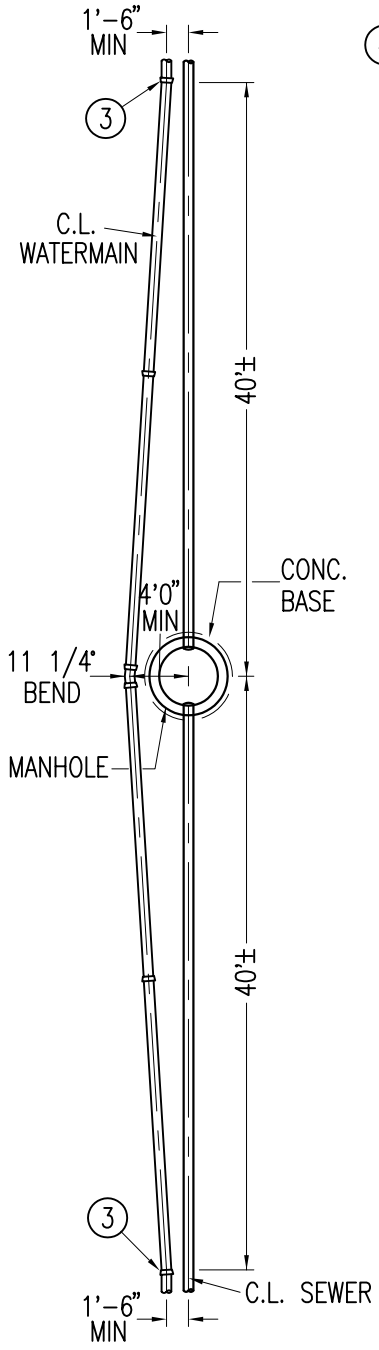
1. WHERE WATERMAIN IS AT HIGHER ELEVATION, THE TRENCH SHALL BE BACKFILLED & THE SELECT MATERIAL SHALL BE COMPACTED TO 95% OF DENSITY BEFORE PLACEMENT OF PIPE.
2. SANITARY SEWER TO BE PRESSURE PIPE SEWER.

(3) MAXIMUM DEFLECTION FOR WATERMAIN IS 5° AT EACH JOINT.

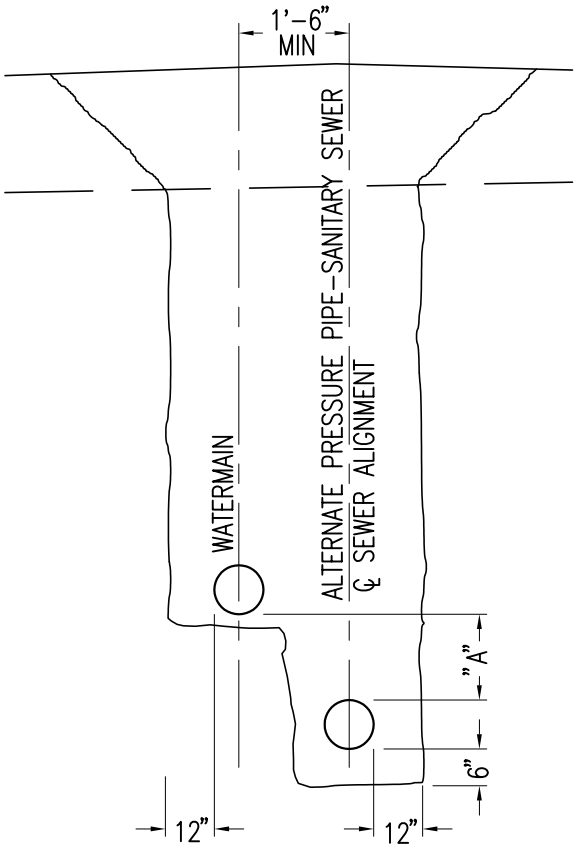
(4) CENTER ONE FULL LENGTH PIECE OF PIPE ON MANHOLE.



DETAIL WHEN DIMENSION "A" IS LESS THAN 18"



DETAIL WHEN DIMENSION "A" IS 18" OR MORE

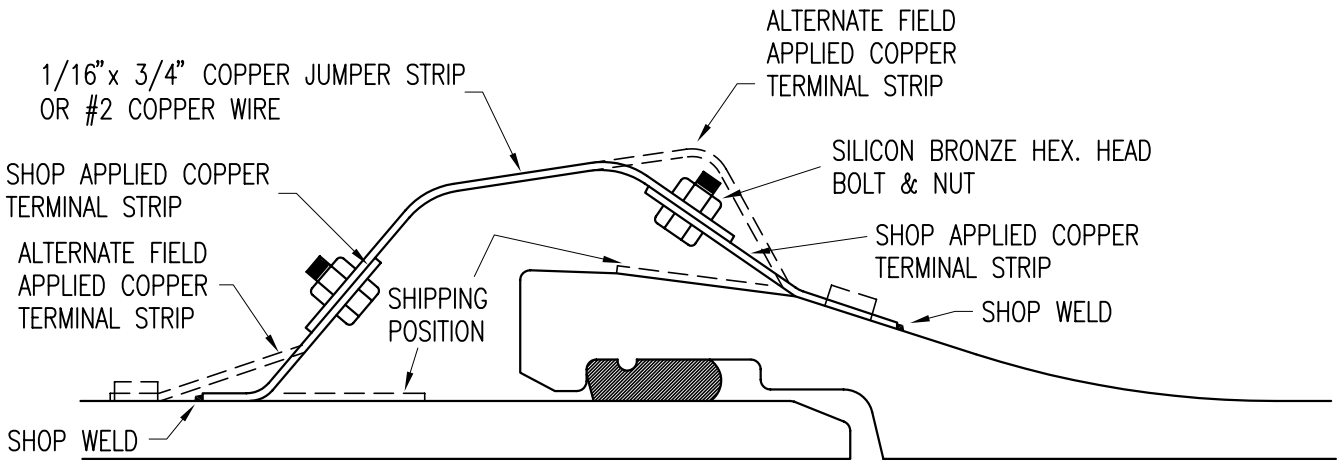


DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

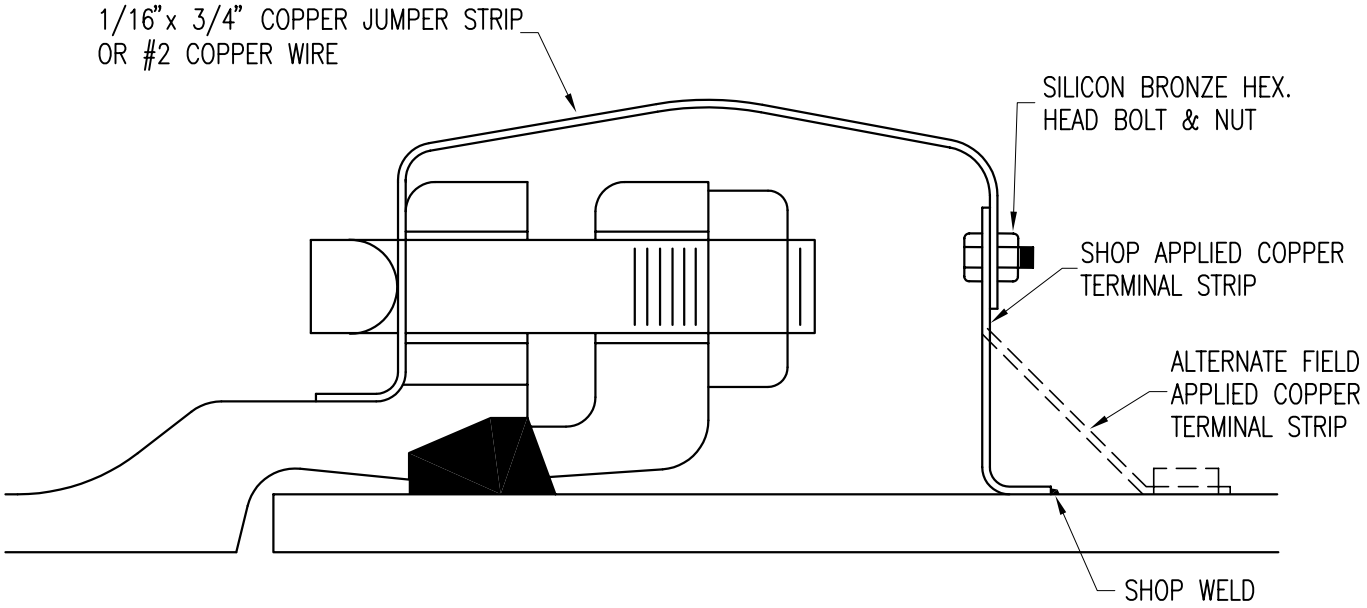
ALIGNMENT OF WATERMAIN AT SEWER MANHOLE IN COMMON TRENCH

Douglas C. Rovang	Russell W. Fries
RPU-WATER UTILITY	DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED	PLATE NO.	REV.
	8/15/02	6-07	C



PUSH ON PIPE JOINT



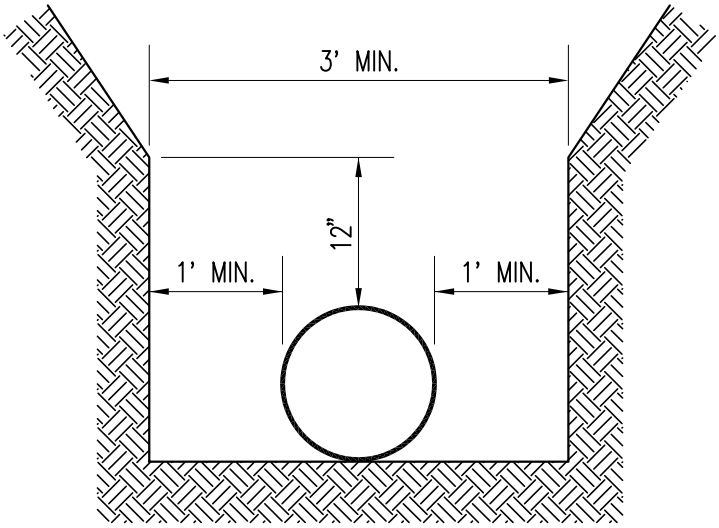
MECHANICAL PIPE JOINT

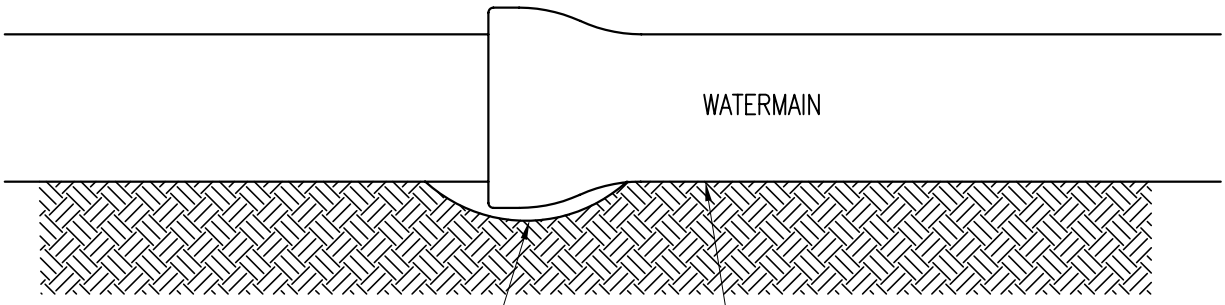
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

ELECTRICAL CONDUCTIVITY

Douglas C. Rovang	Russell W. Fries
RPU–WATER UTILITY	DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED	PLATE NO.	REV.
	4/16/01	6–08	B





BELL HOLES SHALL BE KEPT TO A MINIMUM SIZE

PIPE TO BE SUPPORTED FOR ENTIRE LENGTH WITH NO BLOCKING ALLOWED

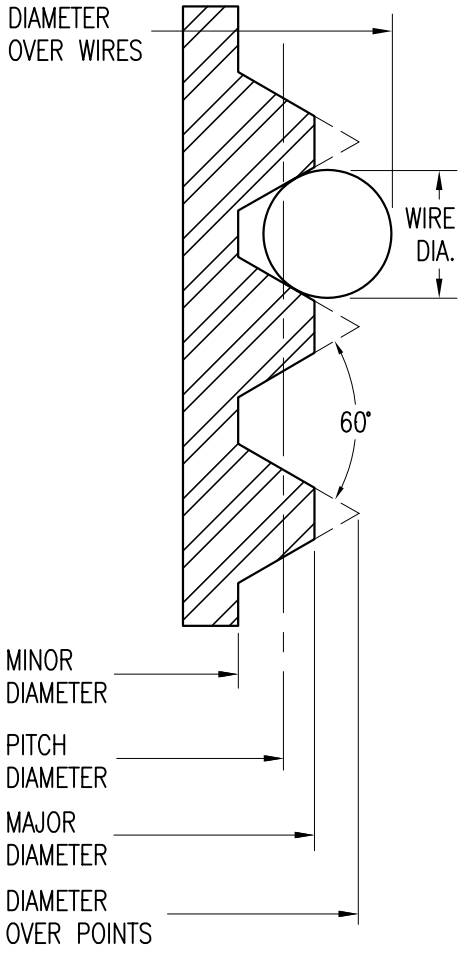
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

INSTALLATION DETAIL

Douglas C. Rovang
RPU–WATER UTILITY

Russell W. Fries
DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 10/1/97	PLATE NO. 6–09	REV. A

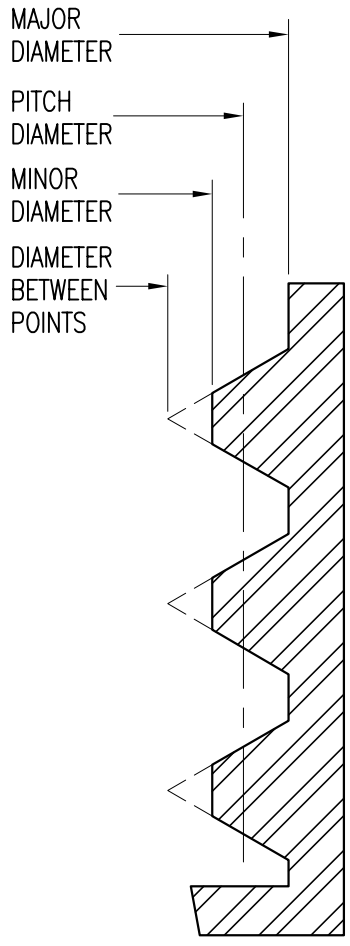


NIPPLE THREAD

THREADS PER INCH	8	
WIRE DIAMETER	0.072	
MAXIMUM DIAMETER OVER POINTS	4.983	INITIAL TURNED
MINIMUM DIAMETER OVER POINTS	4.967	DIMENSIONS
NOMINAL MAJOR DIAMETER	4.937	
MAXIMUM MAJOR DIAMETER	4.943	FINAL TURNED
MINIMUM MAJOR DIAMETER	4.912	DIMENSIONS
MAXIMUM PITCH DIAMETER	4.875	
MINIMUM PITCH DIAMETER	4.859	
MAXIMUM DIMENSION OVER WIRES	4.983	
MINIMUM DIMENSION OVER WIRES	4.967	
MAXIMUM MINOR DIAMETER	4.794	

RING GAGE DIMENSIONS

MAXIMUM PITCH DIAMETER	4.875
MINIMUM PITCH DIAMETER	4.862
MINIMUM MINOR DIAMETER	4.734



COUPLING THREAD

MINIMUM DIAMETER BETWEEN POINTS	4.791	INITIAL BORE
MAXIMUM DIAMETER BETWEEN POINTS	4.807	DIMENSIONS
MINIMUM MINOR DIAMETER	4.818	FINAL BORE
MAXIMUM MINOR DIAMETER	4.850	DIMENSIONS
MINIMUM PITCH DIAMETER	4.899	
MAXIMUM PITCH DIAMETER	4.915	
MINIMUM MAJOR DIAMETER	4.980	

PLUG GAGE DIMENSIONS

MAXIMUM PITCH DIAMETER	4.912
MINIMUM PITCH DIAMETER	4.899
MAXIMUM DIAMETER OVER WIRES	5.020
MINIMUM DIAMETER OVER WIRES	5.007
MAXIMUM MAJOR DIAMETER	5.000

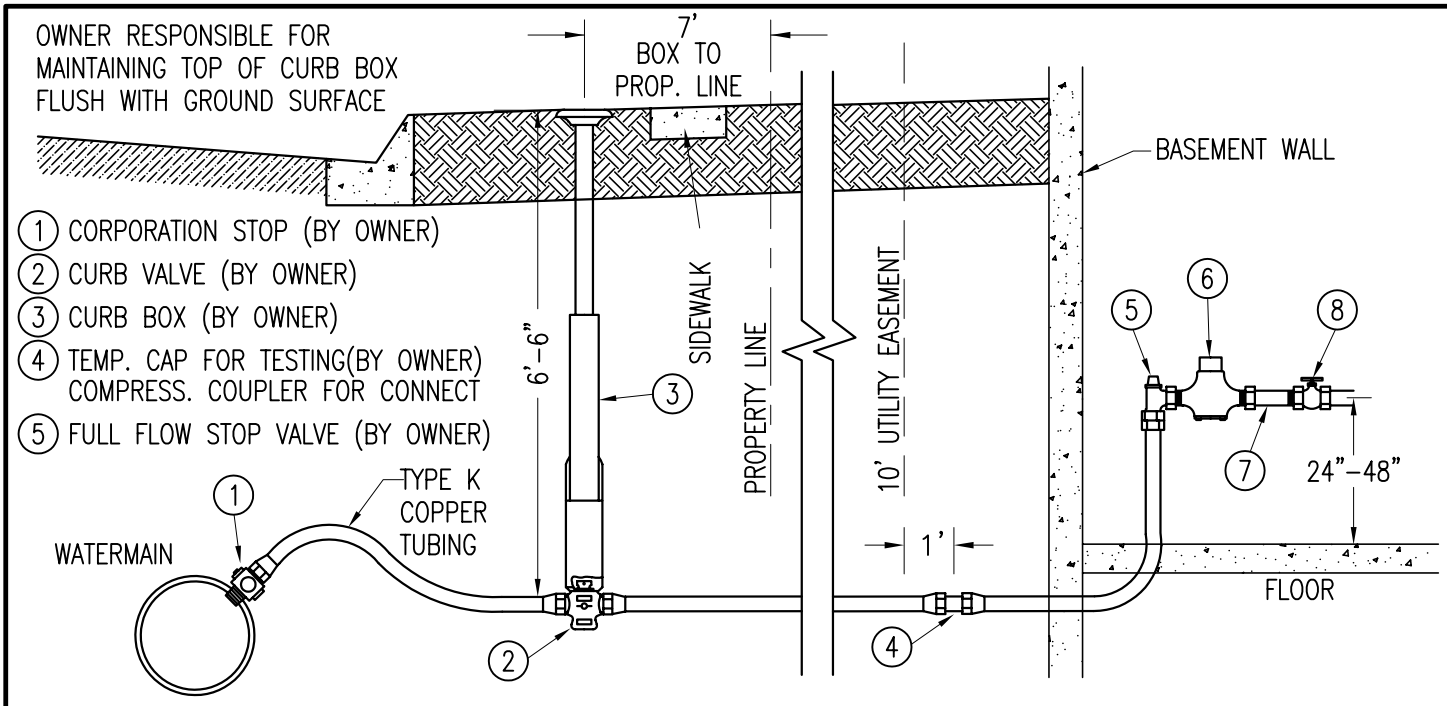
THREAD DATA:
4 15/16 O.D.
x 8 THDS./IN.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

FIRE HYDRANT THREAD PATTERN (4in. NOZZLE)

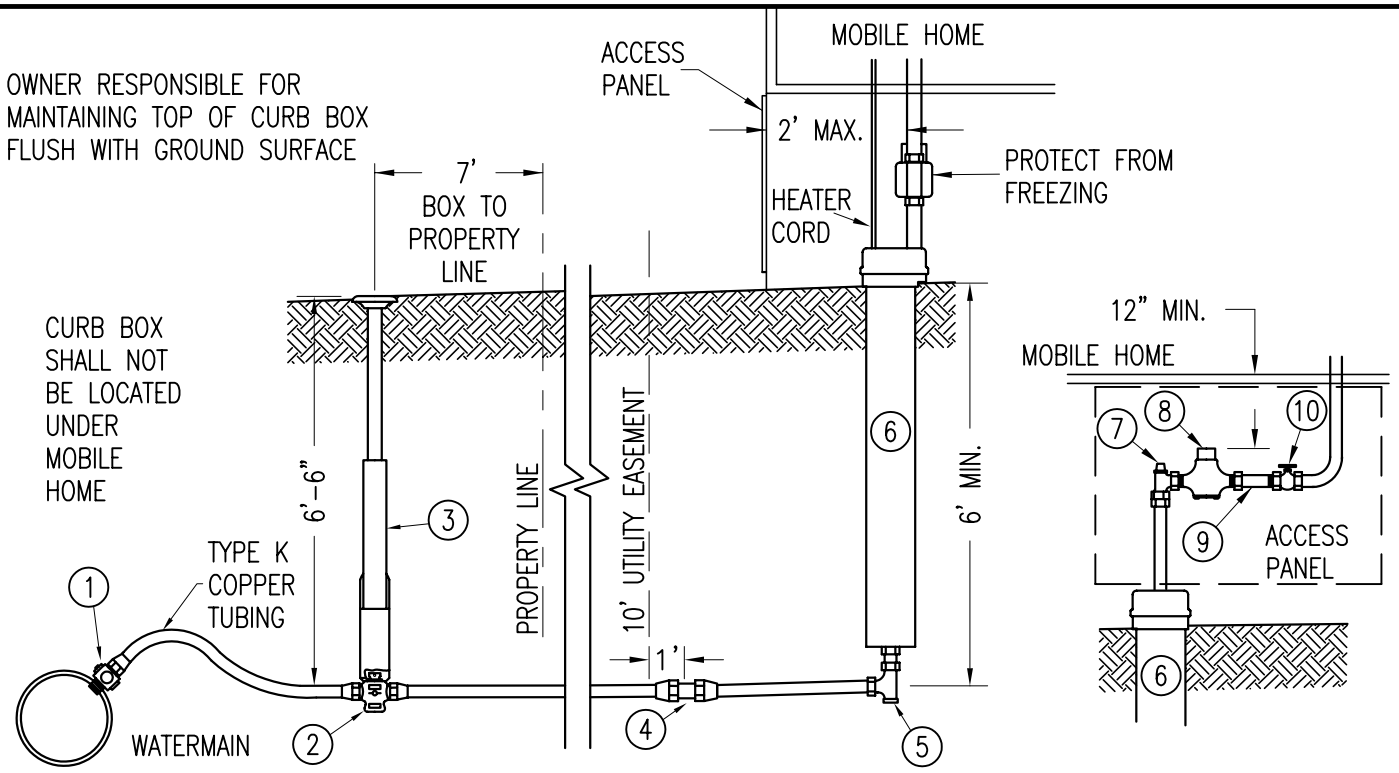
Douglas C. Rovang REG—WATER UTILITY	Russell W. Freese DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED	PLATE NO.	REV.
	10/1/97	6—10	A



1. CORPORATION STOP (BY OWNER)
2. CURB VALVE (BY OWNER)
3. CURB BOX (BY OWNER)
4. TEMP. CAP FOR TESTING(BY OWNER) COMPRESS. COUPLER FOR CONNECT
5. FULL FLOW STOP VALVE (BY OWNER)
6. METER (BY RPU)
7. METER TAIL (BY RPU)
8. FULL FLOW STOP VALVE (BY OWNER)

TYPICAL RESIDENTIAL DETAILS



1. 1" CORPORATION STOP (BY OWNER)
2. 1" CURB VALVE (BY OWNER)
3. CURB BOX TAPPED 1 1/2" OR 2" (BY OWNER)
4. TEMP. CAP FOR TESTING–COMPRESS. COUPLER(BY OWNER)
5. 3/4" M.I.P. X 3/4" M.I.P. X 1" (BY OWNER)
6. WOOD "THERMALINE" HYDRANT OR EQUAL
7. FULL FLOW STOP VALVE (BY OWNER)
8. WATER METER (BY RPU)
9. METER TAIL (BY RPU)
10. FULL FLOW STOP VALVE (BY OWNER)

TYPICAL MANUFACTURED HOME DETAILS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

WATER SERVICE AND METER SETTING DETAILS

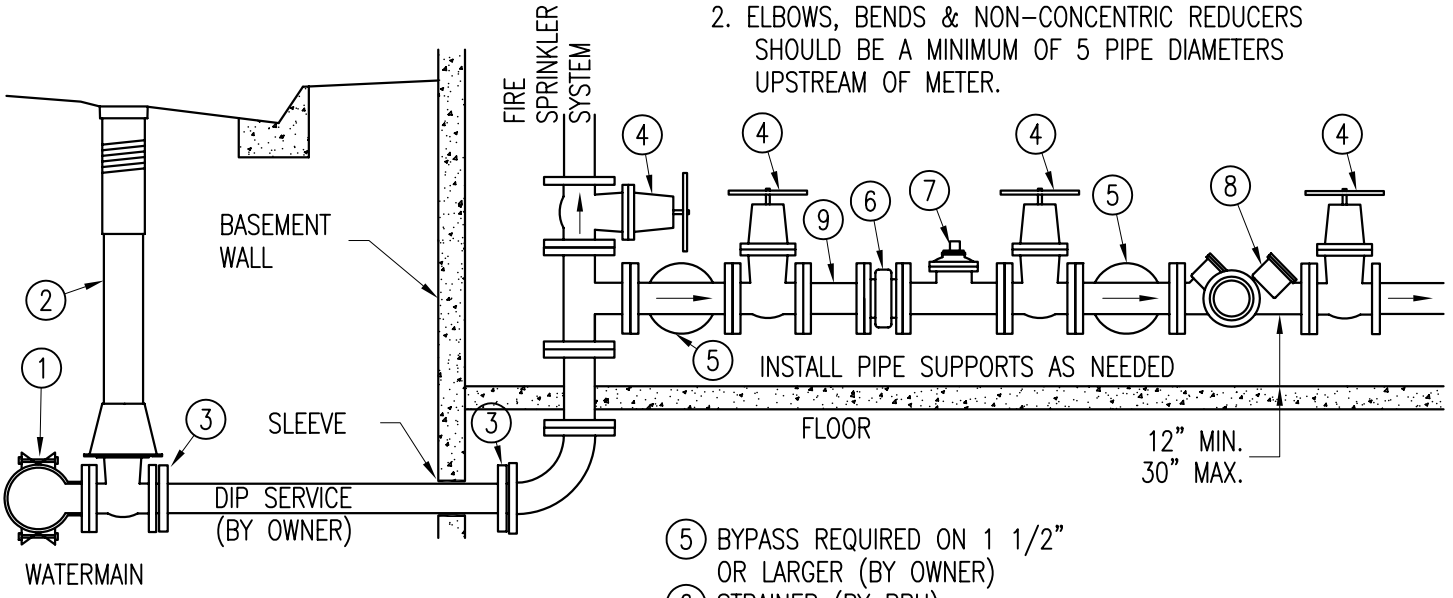
RPU–WATER UTILITY | DIRECTOR

SHT 1 OF 2 SHTS	DATE REVISED	PLATE NO.	REV.
	3/22/06	6–11	D

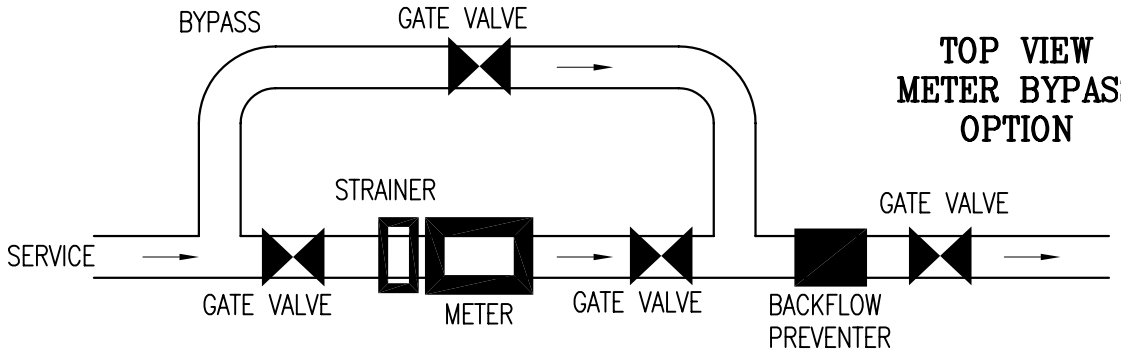
OWNER RESPONSIBLE FOR MAINTAINING TOP OF VALVE BOX FLUSH WITH STREET SURFACE

NOTES

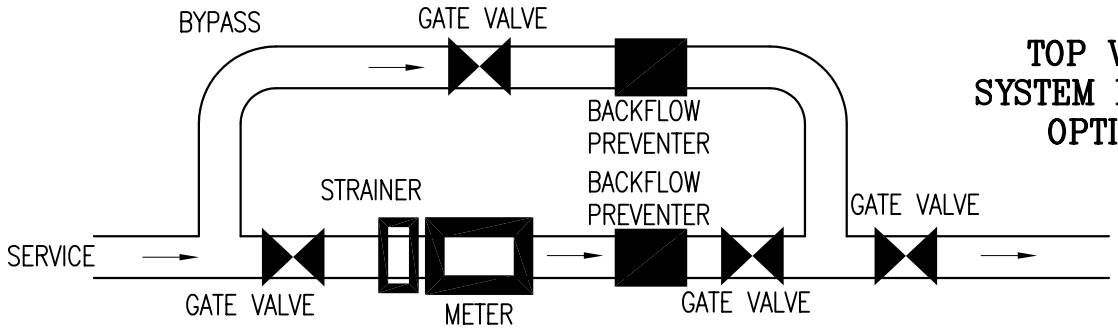
1. DO NOT INSTALL CHECK VALVES OR PRESSURE REDUCING DEVICES UPSTREAM AND LESS THAN 5 PIPE DIAMETERS DOWNSTREAM OF THE METER.
2. ELBOWS, BENDS & NON-CONCENTRIC REDUCERS SHOULD BE A MINIMUM OF 5 PIPE DIAMETERS UPSTREAM OF METER.



1. TAPPING SLEEVE & VALVE OR CUT-IN-TEE & VALVE (BY OWNER)
2. VALVE BOX (BY OWNER)
3. RETAINER GLAND (BY OWNER)
4. FULL FLOW VALVE (BY OWNER)
5. BYPASS REQUIRED ON 1 1/2" OR LARGER (BY OWNER)
6. STRAINER (BY RPU)
7. METER (BY RPU)
8. APPROVED BACKFLOW PREVENTER (BY OWNER)
9. MINIMUM 5 PIPE DIAMETERS UPSTREAM OF STRAINER



TOP VIEW METER BYPASS OPTION



TOP VIEW SYSTEM BYPASS OPTION

TYPICAL COMMERCIAL/ INDUSTRIAL DETAILS

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

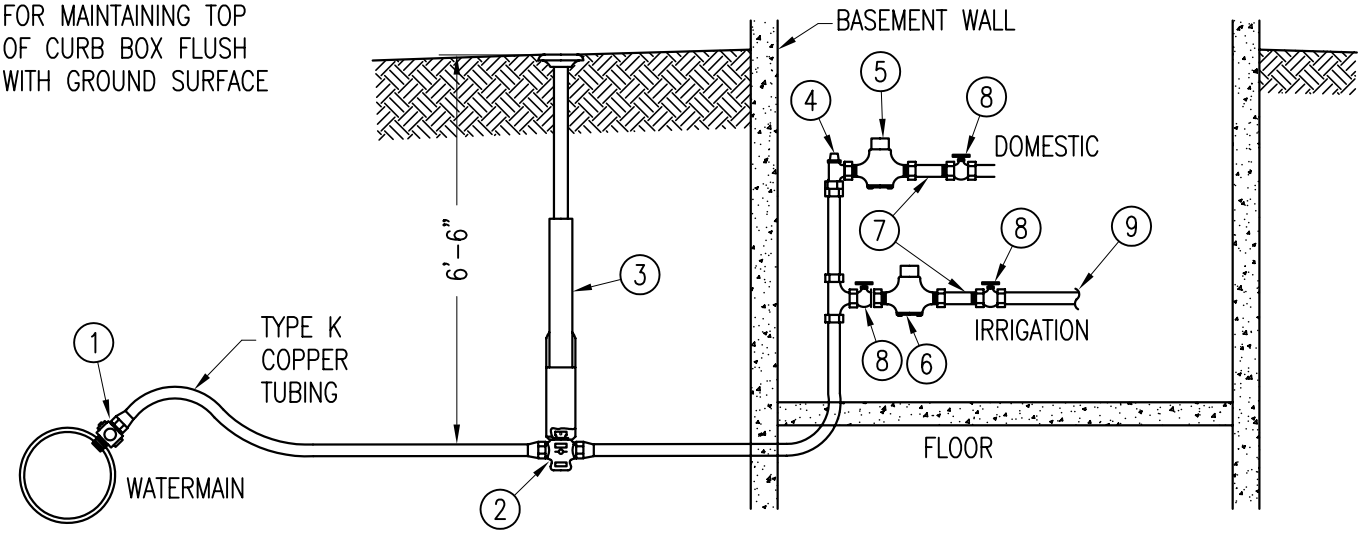
WATER SERVICE AND METER SETTING DETAILS

Douglas C. Rovang
RPU-WATER UTILITY

Russell W. Fries
DIRECTOR

SHT 2 OF 2 SHTS	DATE REVISED 4/1/04	PLATE NO. 6-11	REV. C

OWNER RESPONSIBLE FOR MAINTAINING TOP OF CURB BOX FLUSH WITH GROUND SURFACE

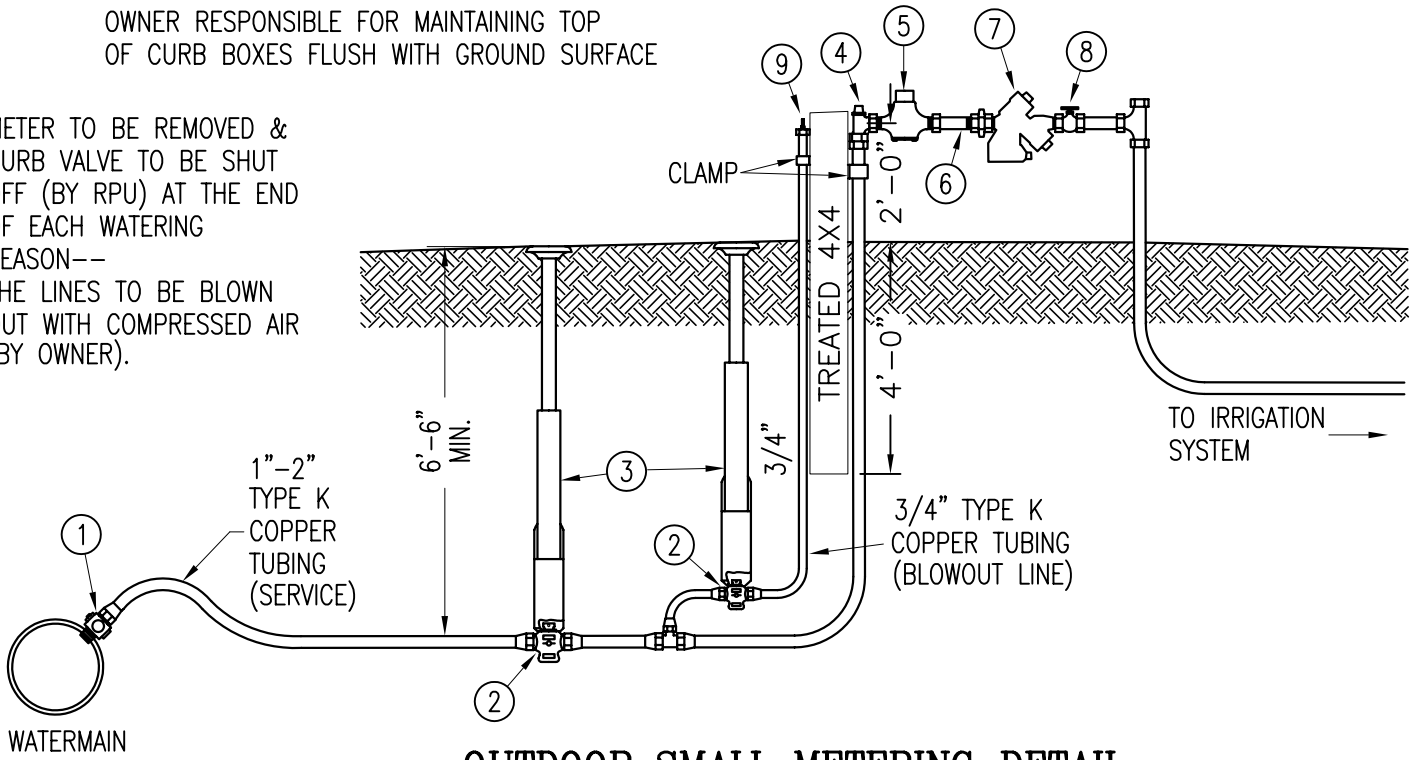


INDOOR METERING DETAIL

1. CORPORATION STOP (BY OWNER)
2. CURB VALVE (BY OWNER)
3. CURB BOX (BY OWNER)
4. FULL FLOW STOP VALVE (BY OWNER)
5. METER TO DOMESTIC SYSTEM (BY RPU)
6. METER TO IRRIGATION SYSTEM (BY RPU)
7. METER TAILS (BY RPU)
8. FULL FLOW STOP VALVE (BY OWNER)
9. APPROVED BACKFLOW PREVENTER (BY OWNER)

OWNER RESPONSIBLE FOR MAINTAINING TOP OF CURB BOXES FLUSH WITH GROUND SURFACE

METER TO BE REMOVED & CURB VALVE TO BE SHUT OFF (BY RPU) AT THE END OF EACH WATERING SEASON-- THE LINES TO BE BLOWN OUT WITH COMPRESSED AIR (BY OWNER).



OUTDOOR SMALL METERING DETAIL (SEASONAL USE ONLY)

1. CORPORATION STOP (BY OWNER)
2. CURB VALVE (BY OWNER)
3. CURB BOX (BY OWNER)
4. ANGLE STOP (BY OWNER)
5. METER (BY RPU)
6. METER TAIL (BY RPU)
7. APPROVED BACKFLOW PREVENTER (BY OWNER)
8. FULL FLOW GATE VALVE (BY OWNER)
9. AIR VALVE STEM FOR BLOWOUT (BY OWNER)

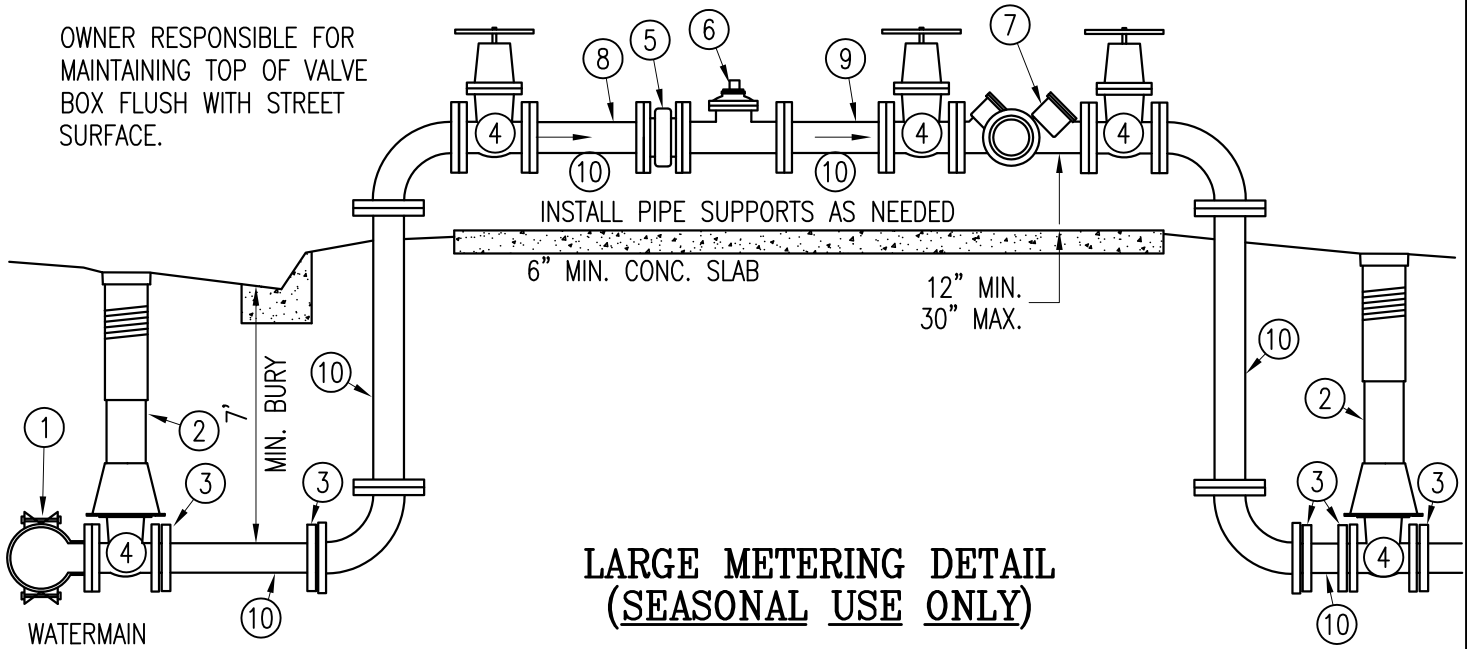
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

IRRIGATION SYSTEM

Douglas C. Rovang
RPU-WATER UTILITY

Russell W. Fries
DIRECTOR

SHT 1 OF 2 SHTS	DATE REVISED	PLATE NO.	REV.
	4/1/04	6-12	C



LARGE METERING DETAIL
(SEASONAL USE ONLY)

1. TAPPING SLEEVE & VALVE OR CUT–IN–TEE & VALVE (BY OWNER)
2. VALVE BOX (BY OWNER)
3. RETAINER GLAND (BY OWNER)
4. FULL FLOW VALVE (BY OWNER)
5. STRAINER (BY RPU)
6. METER (BY RPU)
7. APPROVED BACKFLOW PREVENTER (BY OWNER)
8. MINIMUM 5 PIPE DIAMETERS UPSTREAM OF STRAINER
9. MINIMUM 2 PIPE DIAMETERS DOWNSTREAM OF METER
10. DUCTILE IRON PIPE SERVICE BY OWNER

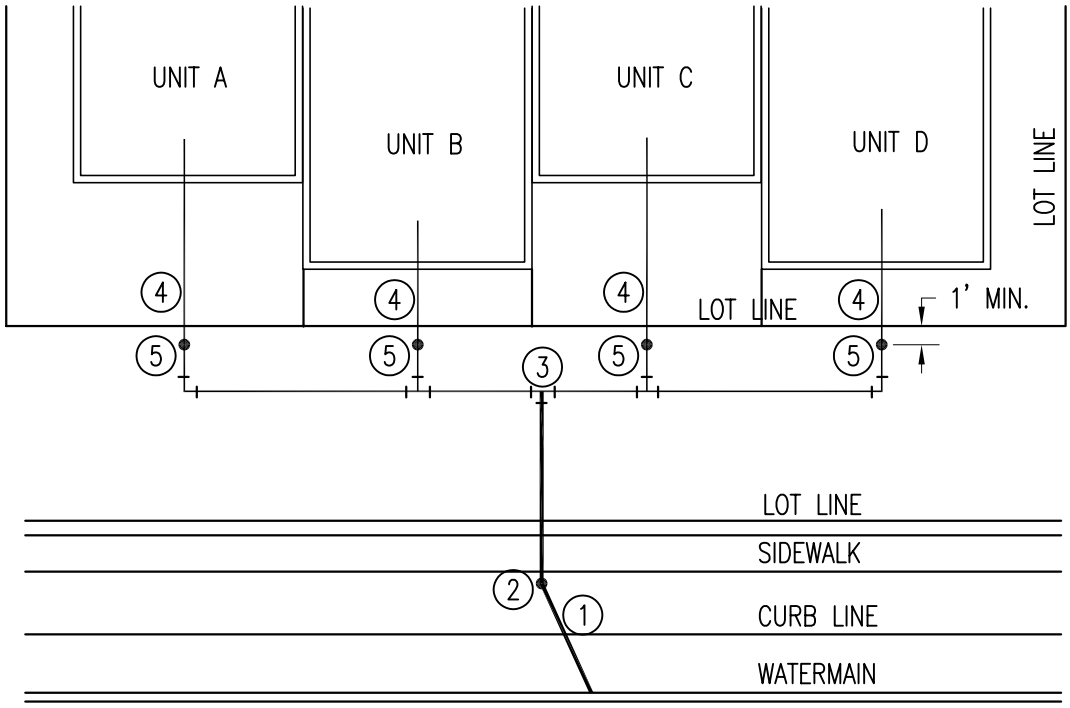
NOTES

1. DO NOT INSTALL BACK FLOW PREVENTER UPSTREAM AND LESS THAN 5 PIPE DIAMETERS DOWNSTREAM OF THE METER.
2. ELBOWS, BENDS & NON–CONCENTRIC REDUCERS SHOULD BE A MINIMUM OF 10 PIPE DIAMETERS UPSTREAM OF METER.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

IRRIGATION SYSTEM

RPU–WATER UTILITY		DIRECTOR	
SHT 2 OF 2 SHTS	DATE REVISED 4/1/04	PLATE NO. 6–12	REV. C



1. MASTER SERVICE
2. MASTER CURB BOX
3. MASTER TEE (SPLIT FOR INDIVIDUAL UNIT SERVICES)
4. INDIVIDUAL SERVICES–MINIMUM 1"
5. INDIVIDUAL CURB BOXES

NOTE

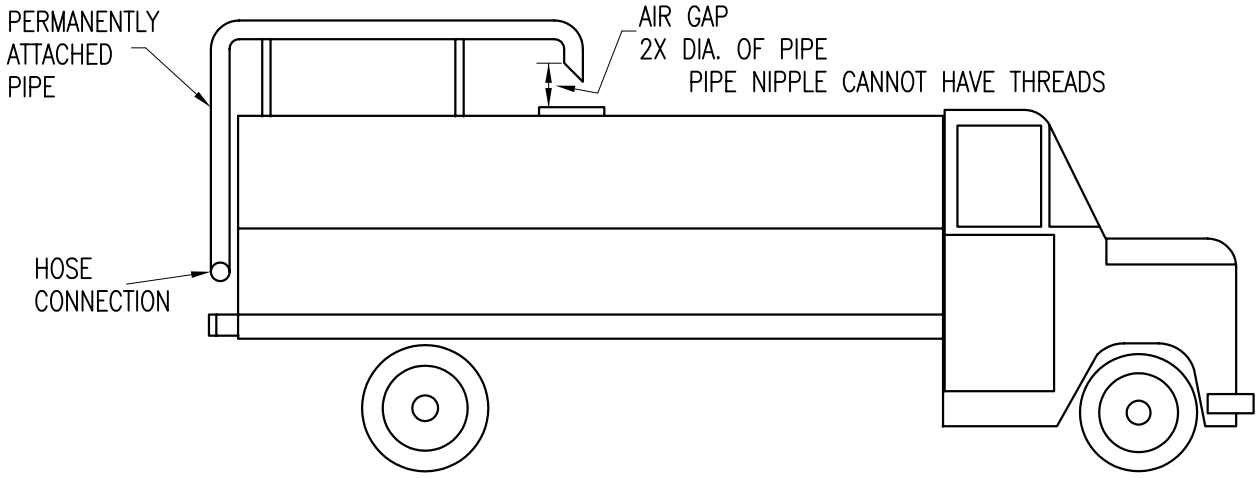
ALL SERVICE CONNECTIONS OF THIS TYPE SHALL BE REVIEWED BY RPU FOR PROPER SIZING PRIOR TO INSTALLATION. SERVICE FROM WATERMAIN TO BUILDING BY OWNER.

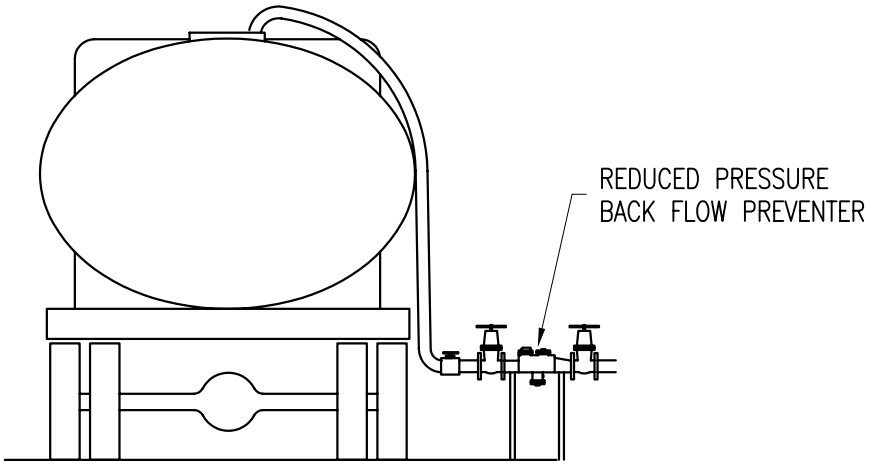
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

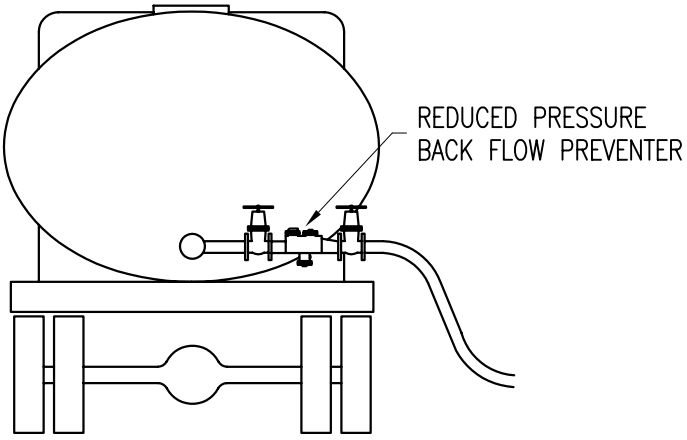
ALTERNATE SERVICE LAYOUT FOR MULTIPLE–UNIT BUILDINGS

Douglas C. Rovang	Russell W. Fries
RPU–WATER UTILITY	DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED	PLATE NO.	REV.
	6/15/07	6–13	C





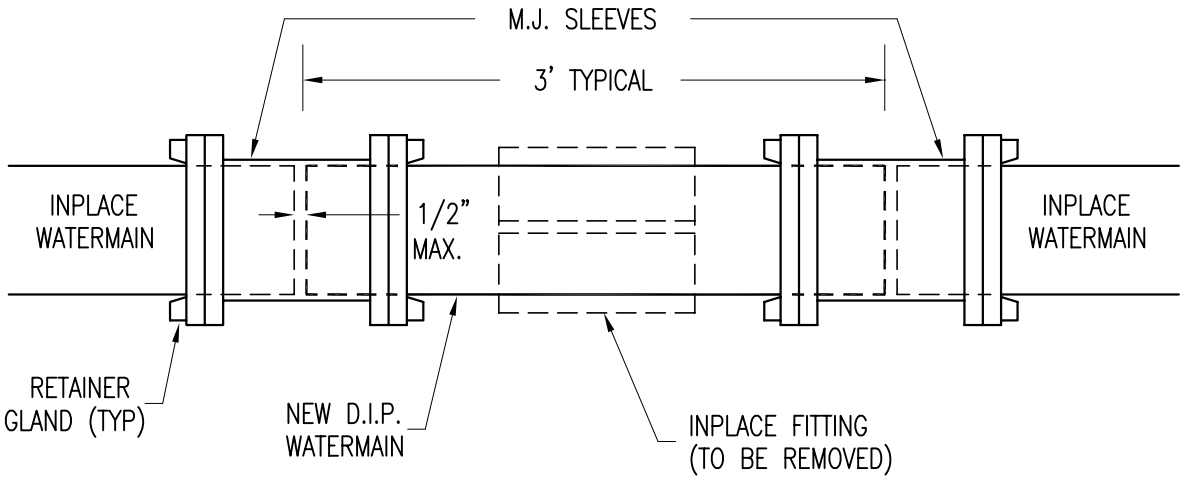


DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

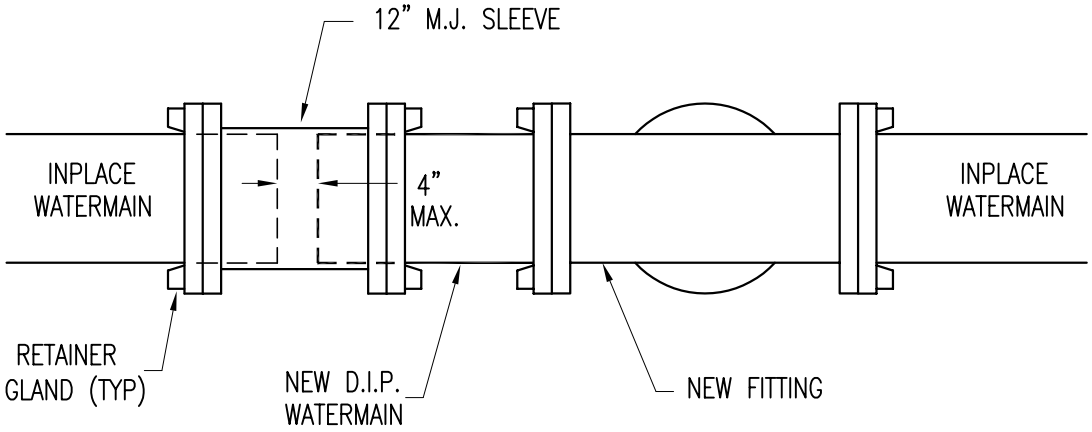
BACKFLOW PREVENTION FOR WATER TANKERS

Douglas C. Rovang	Russell W. Fries
RPO–WATER UTILITY	DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 4/1/04	PLATE NO. 6–14	REV. B



TYPICAL FITTING REMOVAL DETAIL



TYPICAL "CUT-IN" FITTING DETAIL

NOTE

1. USE 8" BLOCKING UNDER SLEEVES TO PREVENT SHEARING DUE TO SETTLEMENT.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

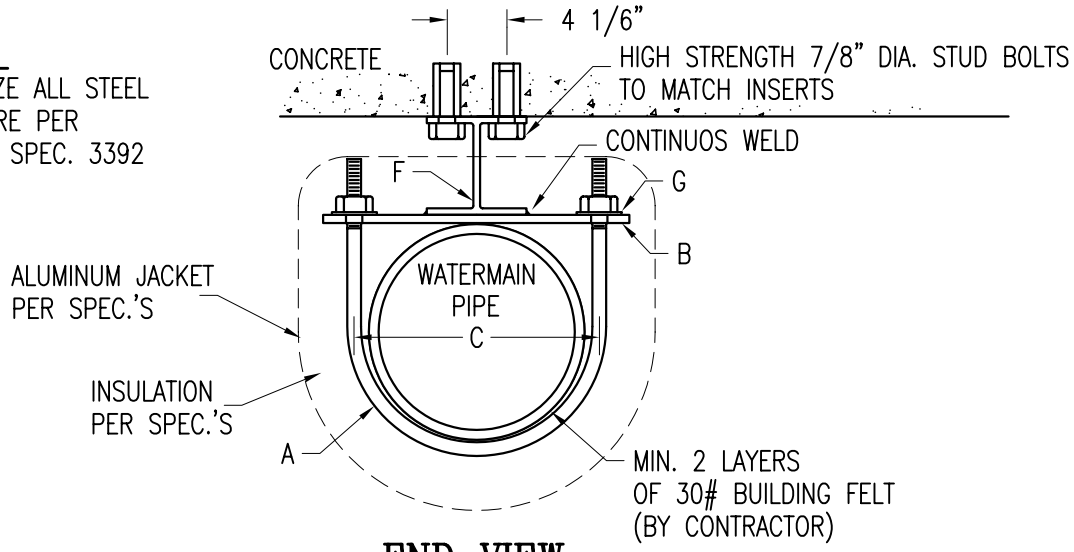
TYPICAL FITTING CUT-IN AND REMOVAL DETAILS

Douglas C. Rovang	Russell W. Fries
RPU-WATER UTILITY	DIRECTOR

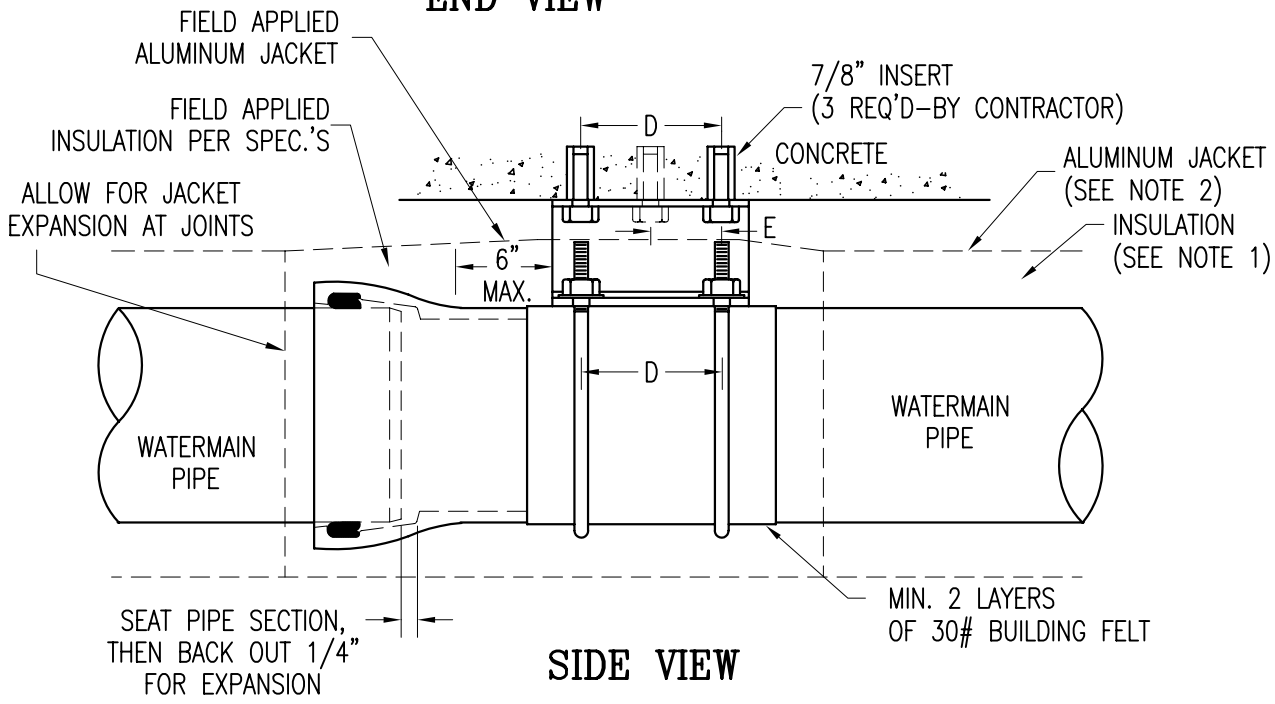
SHT 1 OF 1 SHTS	DATE REVISED	PLATE NO.	REV.
	10/1/97	6-15	A

NOTE

GALVANIZE ALL STEEL HARDWARE PER MN/DOT SPEC. 3392



END VIEW



SIDE VIEW

	8" WATERMAIN	12" WATERMAIN
A	3/4" x 10" STD. U-BOLT	7/8" x 14" STD. U-BOLT
B	15" x 12" x 1/2" STEEL PLATE	18" x 12" x 1/2" STEEL PLATE
	W/ 4-7/8" HOLES	W/ 4- 1" HOLES
C	11 5/8"	15"
D	9"	9"
E	4 1/2"	4 1/2"
F	W6 x 25 STEEL I-BEAM W/ 3-1" HOLES	W6 x 25 STEEL I-BEAM W/ 3-1" HOLES
G	DOUBLE 1/4" x 3/4" WASHERS (8 TOTAL)	1/4" x 3/4" WASHERS (4 TOTAL)

NOTE 1 – PIPE INSULATION-4" STYROFOAM, FABRICATED PER ASTM C-450 AND C-585.

NOTE 2 – ALUMINUM JACKETING-ASTM B-209, MINIMUM 0.016" THICKNESS; 40# POLY-CRAFT PAPER MOISTURE BARRIER IN INTERIOR SIDE; SECURED WITH STAINLESS STEEL BANDING.

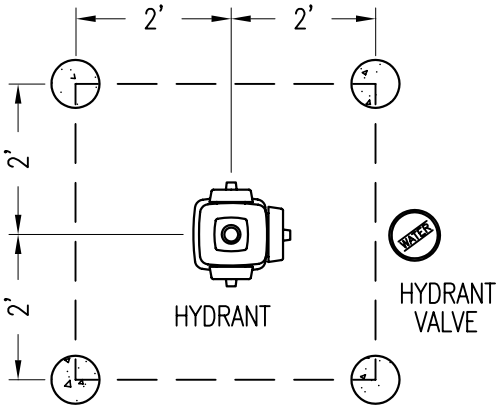
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

BRIDGE CROSSING PIPE HANGER DETAILS

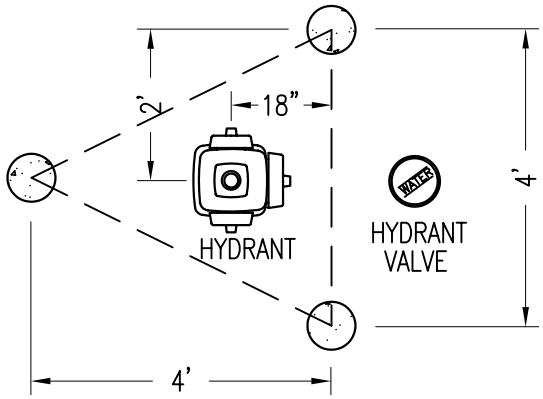
Douglas C. Rovang
RPU-WATER UTILITY

Russell W. Fries
DIRECTOR

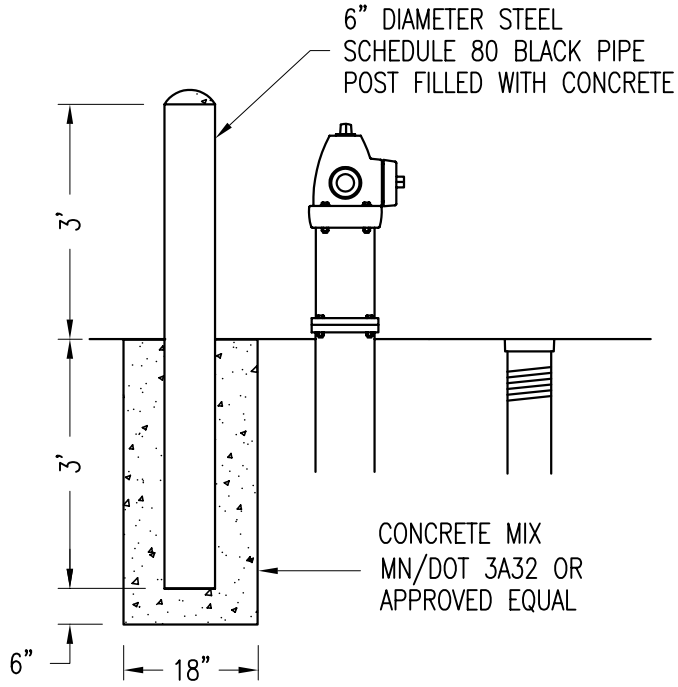
SHT 1 OF 1 SHTS	DATE REVISED 4/1/04	PLATE NO. 6-16	REV. C



4 POST LAYOUT



3 POST LAYOUT



SIDE VIEW

NOTE

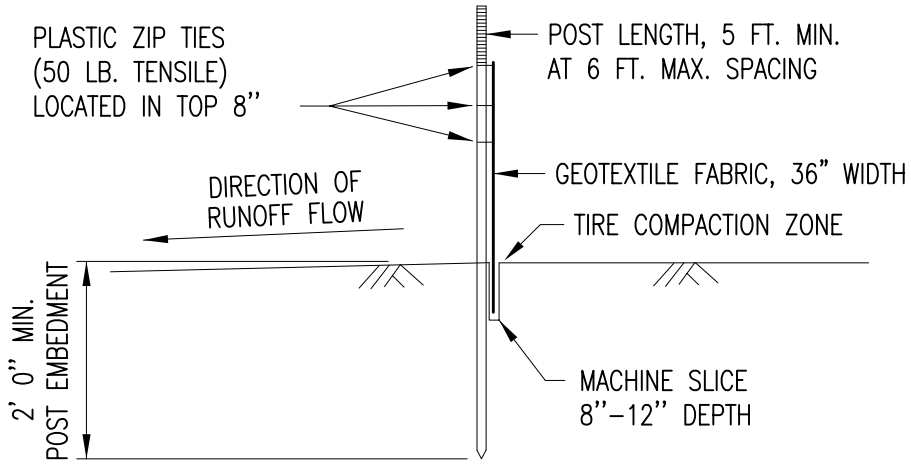
CARE SHOULD BE TAKEN WHEN POSITIONING THE PROTECTIVE POSTS SO THAT THE HYDRANT NOZZLES ARE NOT OBSTRUCTED.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

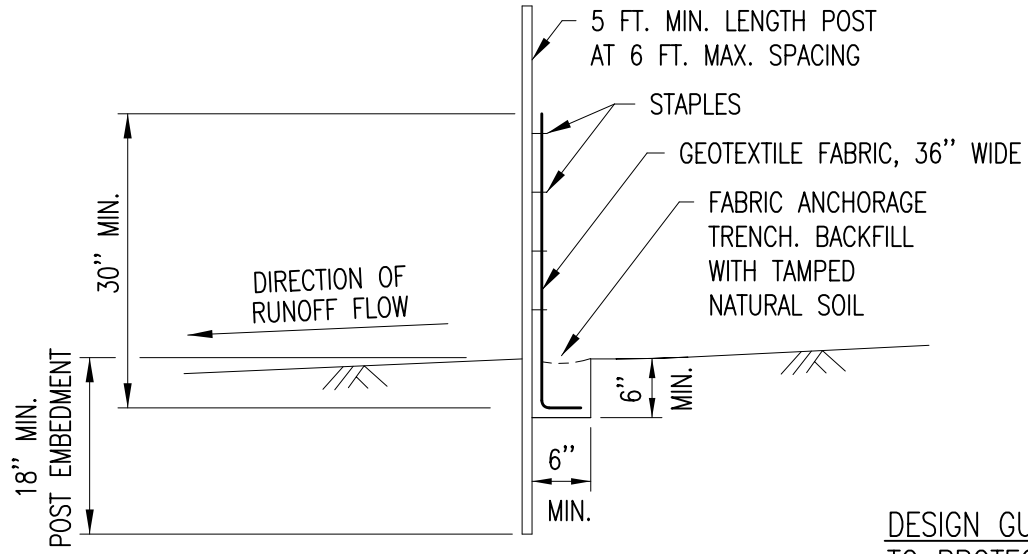
HYDRANT PROTECTIVE POSTS

Douglas C. Rovang	Russell W. Fries
RPU–WATER UTILITY	DIRECTOR

SHT 1 OF 1 SHTS	DATE REVISED 10/1/97	PLATE NO. 6–17	REV. A

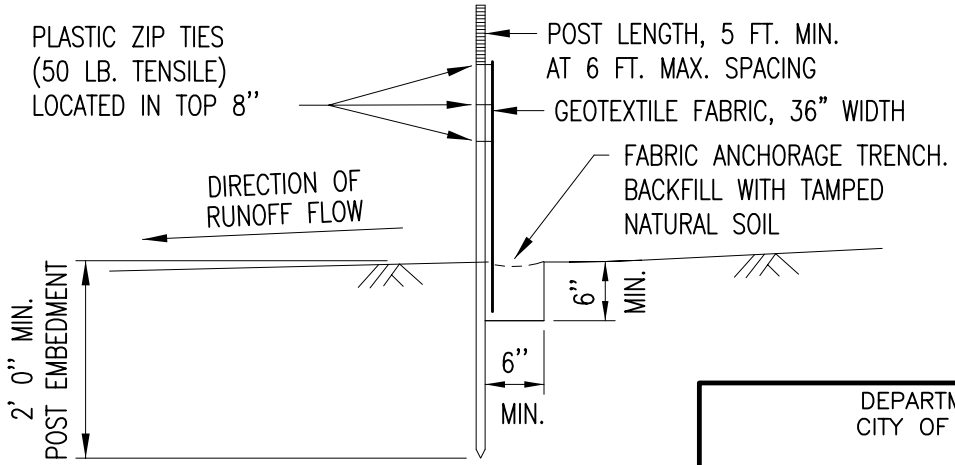


STANDARD MACHINE SLICED



PREASSEMBLED

DESIGN GUIDELINES:
TO PROTECT AREAS
FROM SHEET FLOW.
MAXIMUM CONTRIBUTING
AREA: 1 ACRE



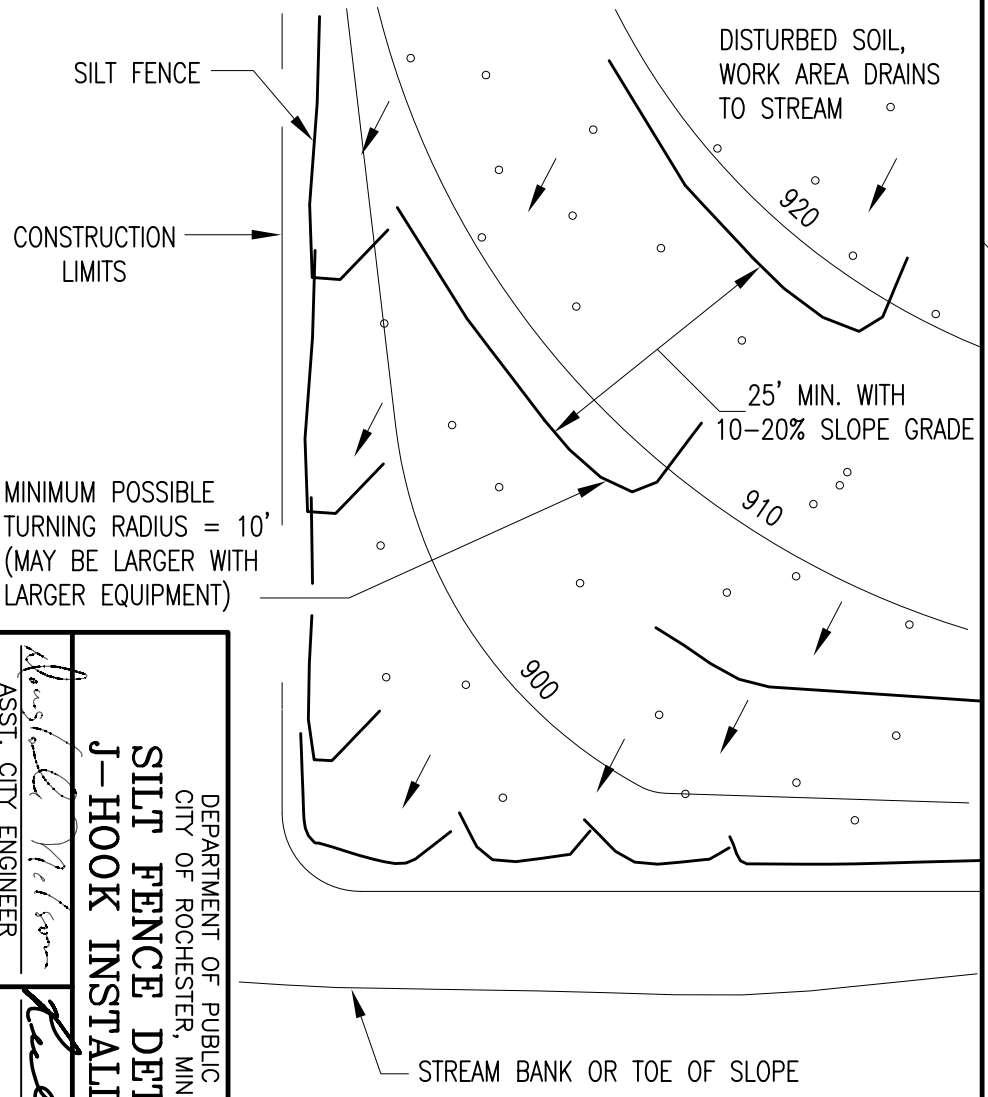
HEAVY DUTY
(HAND INSTALLED)

REFERENCE: MN/DOT SPEC. 3886

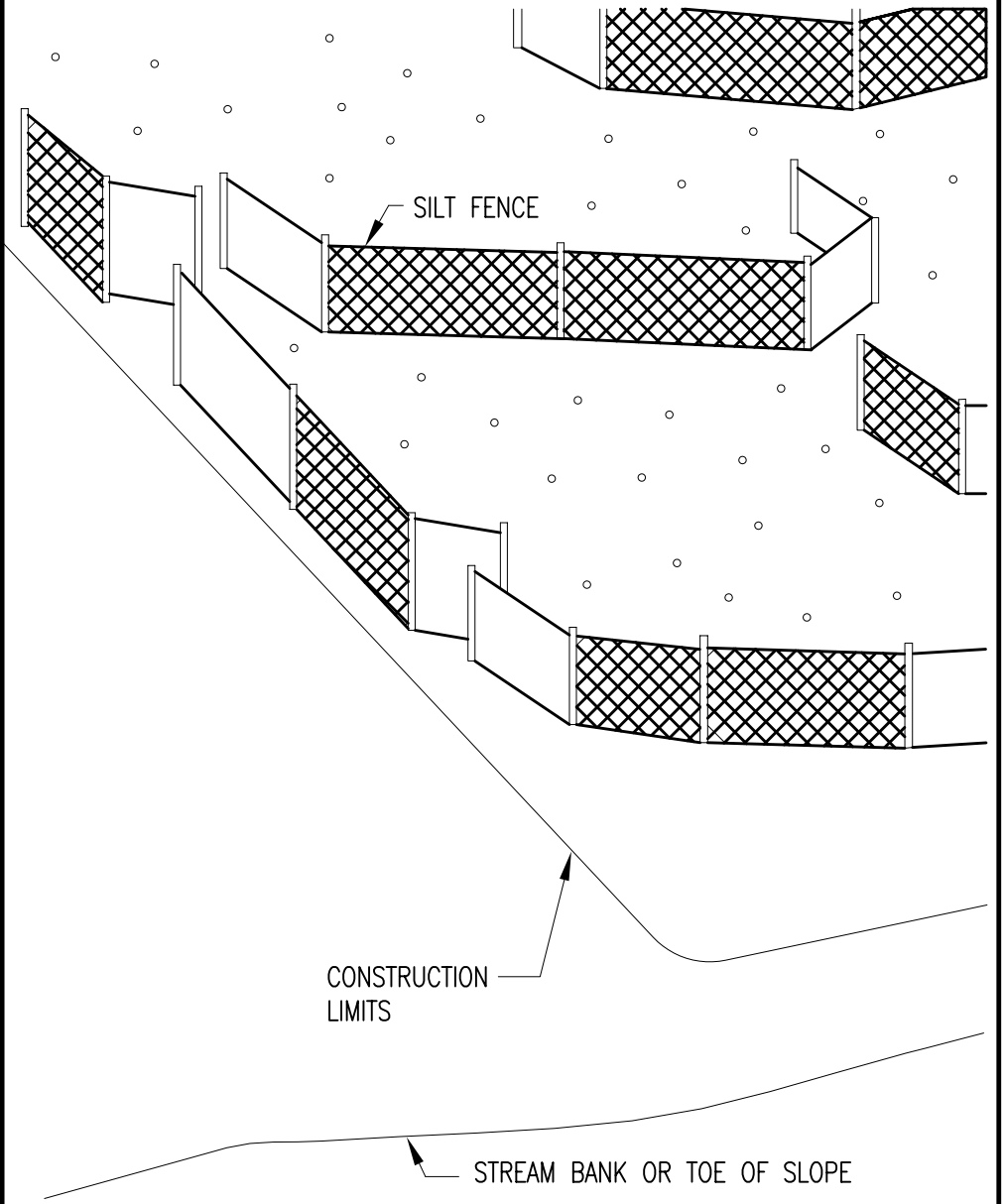
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

SILT FENCE DETAILS

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 2 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–01	REV. B	



PLAN VIEW



SIDE VIEW

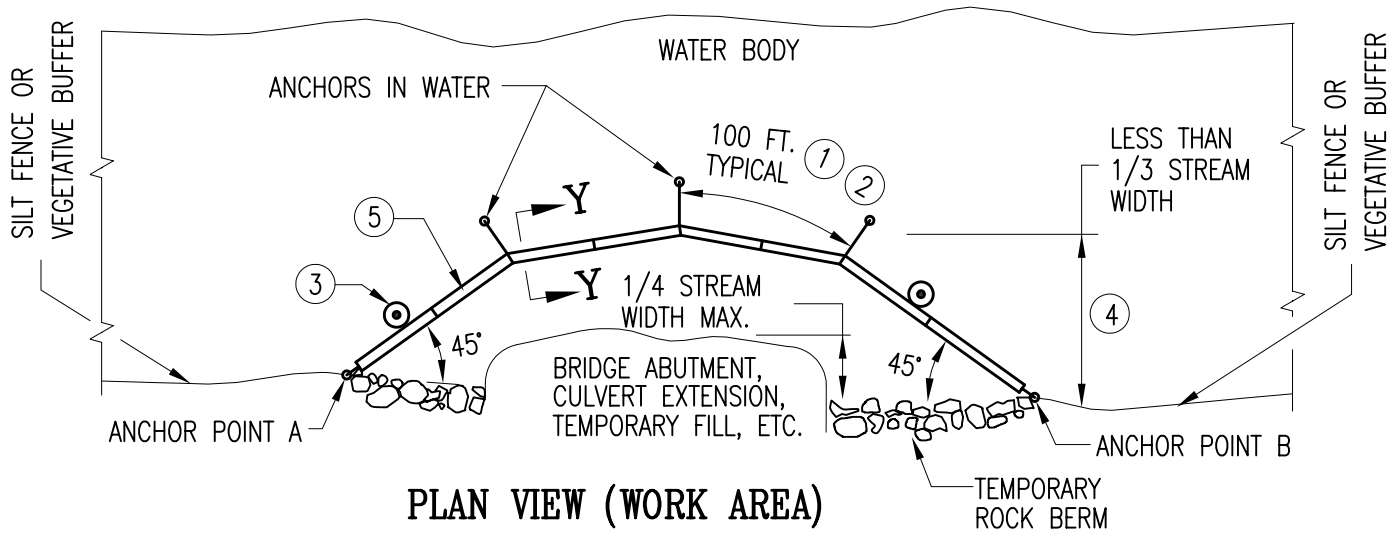
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

SILT FENCE DETAILS– J–HOOK INSTALLATION

ASST. CITY ENGINEER

DIRECTOR

SHT 2 OF 2 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–01	REV. A



PLAN VIEW (WORK AREA)

NOTES:

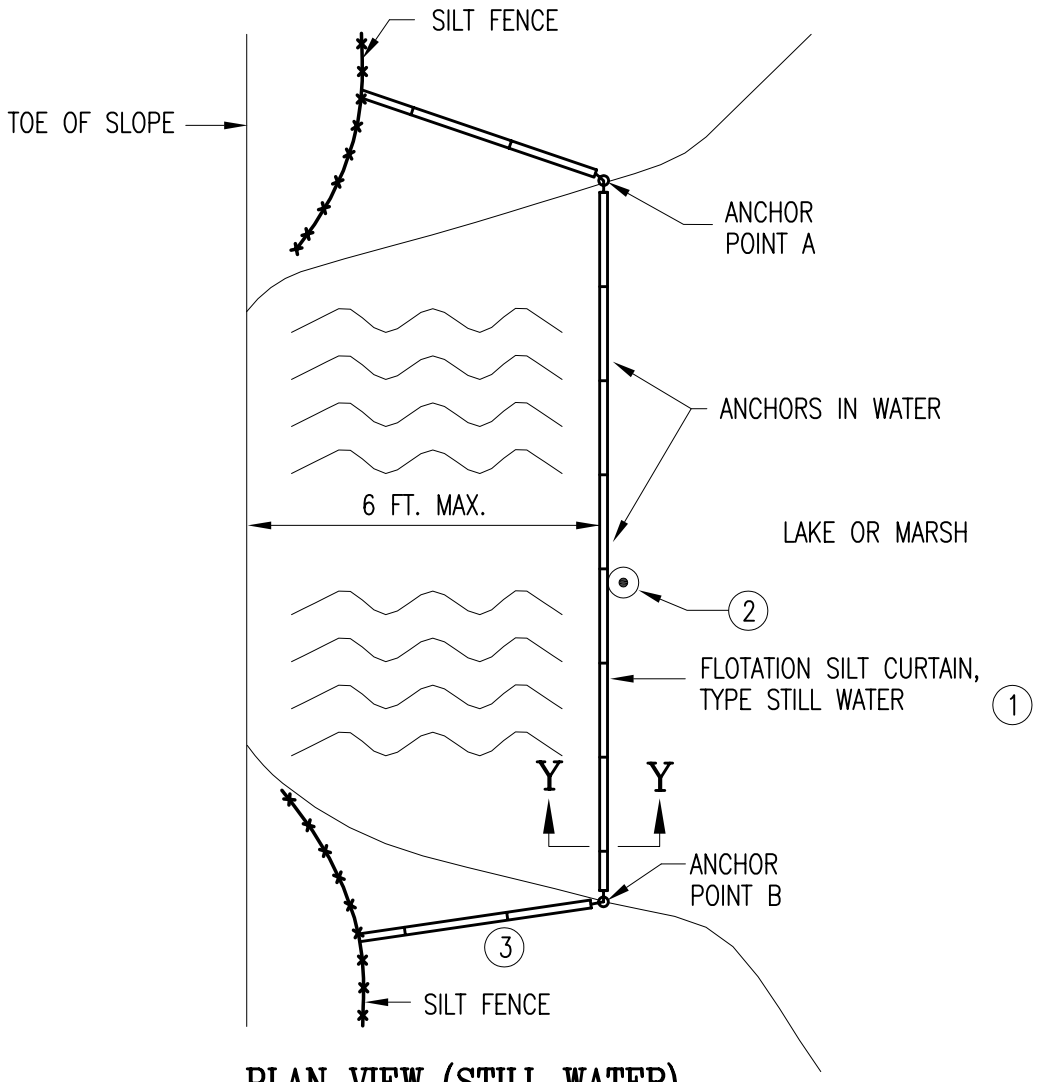
SEE SPECS. 2573 & 3887.

1. 100 FT. MAX. SPACING BETWEEN ANCHORS. ANCHORS WEIGH MIN. 40 LBS..
2. USE ENOUGH ANCHORS TO HOLD SILT CURTAIN IN PLACE.
3. ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.
4. KEEP AS CLOSE TO WORK AREA AS POSSIBLE.
5. SILT CURTAIN, ROCK BERM OR SHEET PILE AS REQUIRED TO CONTROL THE INFILTRATION OF SILT.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

FLOTATION SILT CURTAIN– WORK AREA

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–02	REV. A



PLAN VIEW (STILL WATER)

NOTES:

SEE SPECS. 2573 & 3887.

(1) USE ENOUGH ANCHORS TO HOLD SILT CURTAIN IN PLACE.

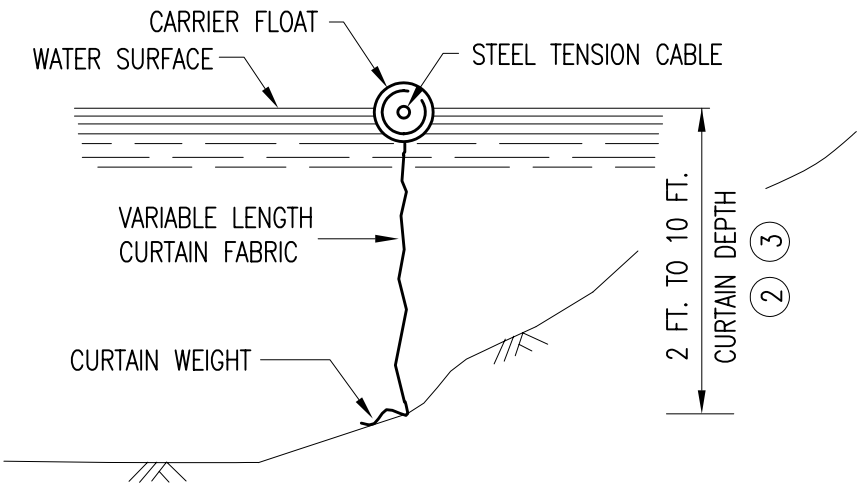
(2) ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.

(3) IF 6 INCHES OR LESS OF WATER, USE BALE BARRIERS, SEE SHEET 2.

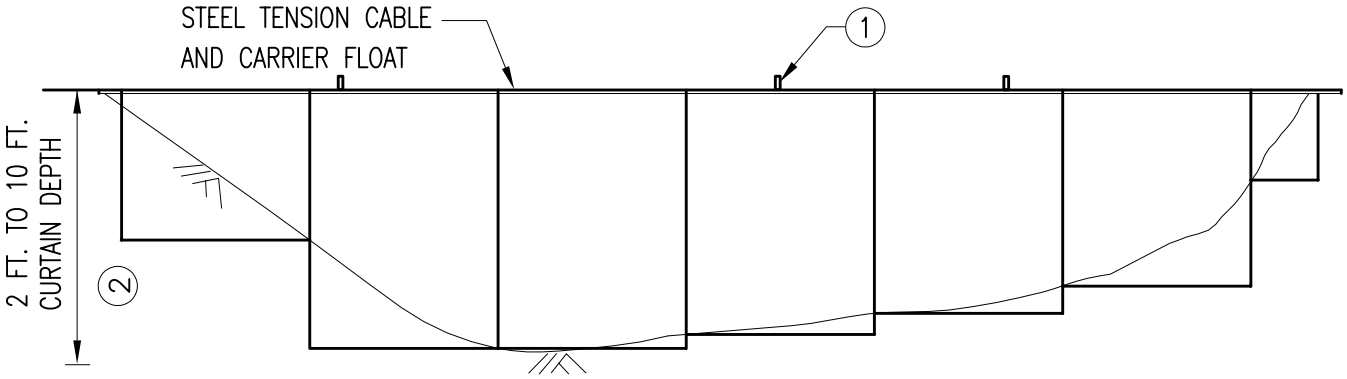
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

FLOTATION SILT CURTAIN– STILL WATER

ASST. CITY ENGINEER	DIRECTOR			
SHT 2 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–02	REV. A



SECTION Y–Y (FOR WORK AREA AND STILL WATER)



FLOTATION SILT CURTAIN – WORK AREA AND STILL WATER

FOR CONTAINING OVERFLOWS FROM WEIRS, STANDPIPES, SETTLING PONDS

NOTES:

SEE SPECS. 2573 & 3887.

① ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.

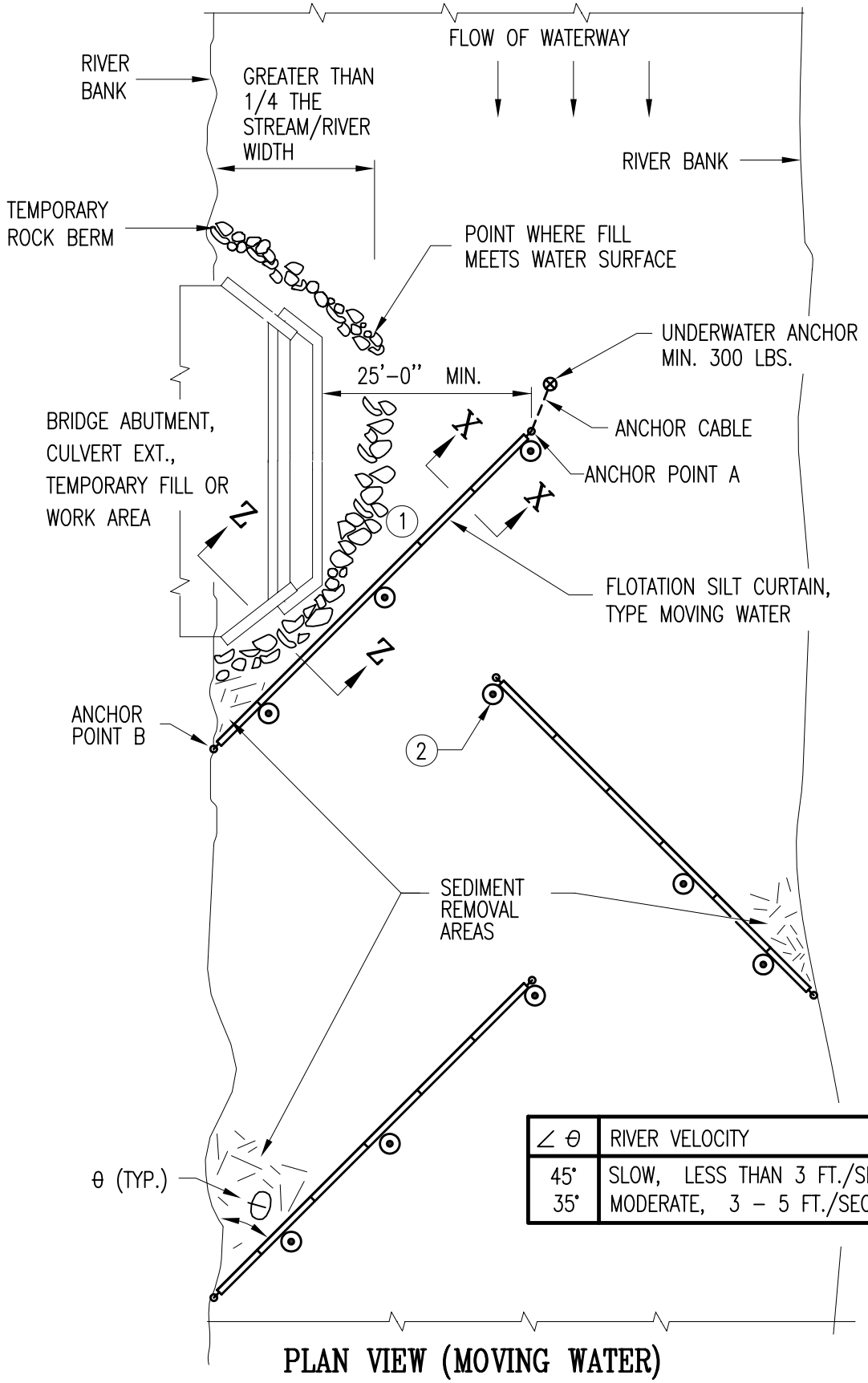
② WATER DEPTH CAN BE 0 FEET TO 10 FEET.

③ SILT CURTAIN HEIGHTS INCLUDES MAXIMUM WAVE HEIGHT FOR WATER BODY.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

**FLOTATION SILT CURTAIN–
WORK AREA & STILL WATER**

ASST. CITY ENGINEER	DIRECTOR			
SHT 3 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–02	REV. A



∠ θ	RIVER VELOCITY
45°	SLOW, LESS THAN 3 FT./SEC.
35°	MODERATE, 3 – 5 FT./SEC.

PLAN VIEW (MOVING WATER)

NOTES:

SEE SPECS. 2573 & 3887.

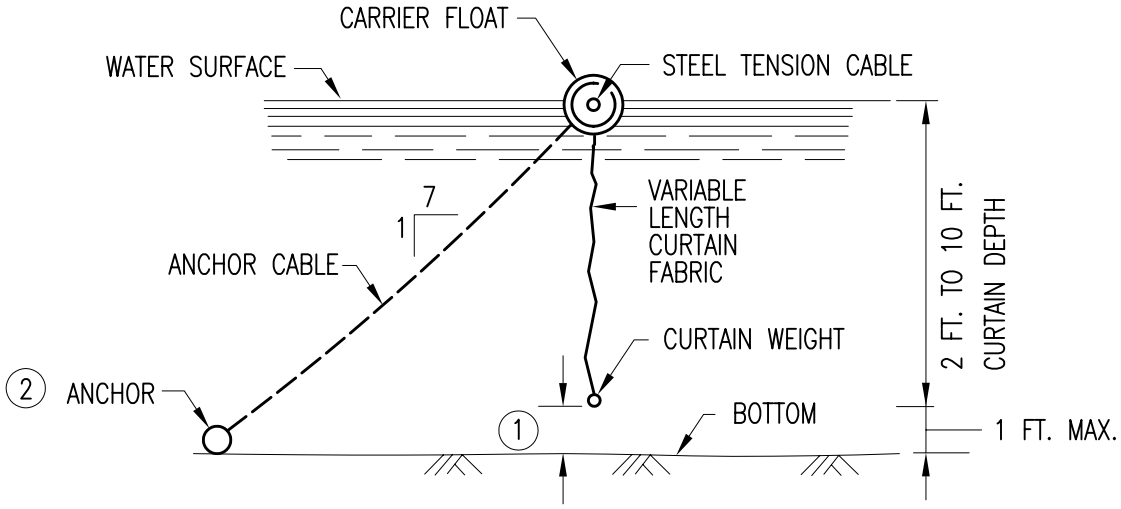
(1) 100 FT. MAX. SPACING BETWEEN ANCHORS. ANCHORS WEIGH MIN. 40 LBS..

(2) ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED

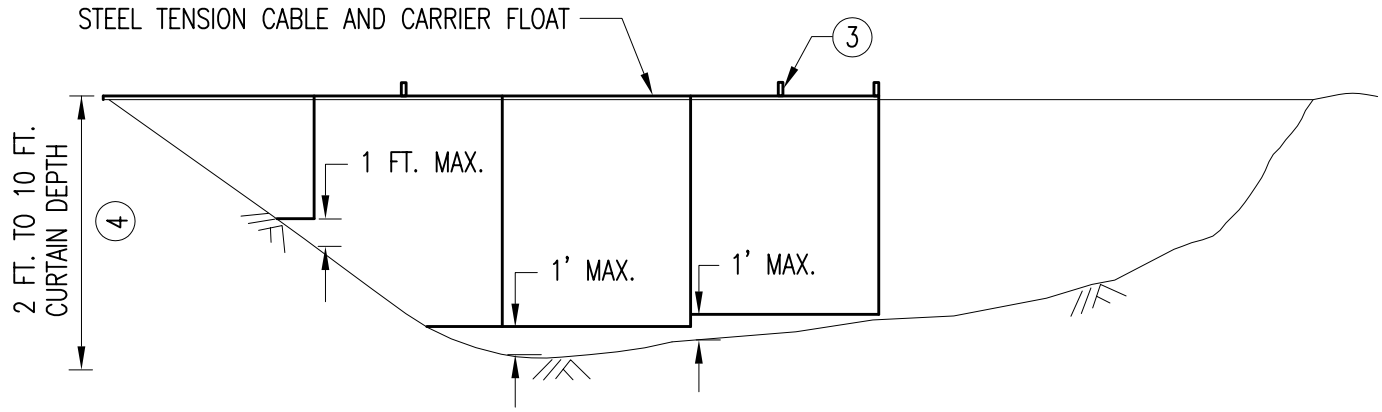
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

FLOTATION SILT CURTAIN– MOVING WATER

ASST. CITY ENGINEER	DIRECTOR			
SHT 4 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–02	REV. A



SECTION X–X



FLOTATION SILT CURTAIN – MOVING WATER

USE FOR SMALLER RIVERS
WITH SLOW OR MODERATE VELOCITY

NOTES:

SEE SPECS. 2573 & 3887.

(1) CURTAIN EXTENDS TO 1 FT. MAXIMUM FROM BOTTOM OF WATER BODY.

(2) USE ENOUGH ANCHORS TO HOLD SILT CURTAIN IN PLACE.

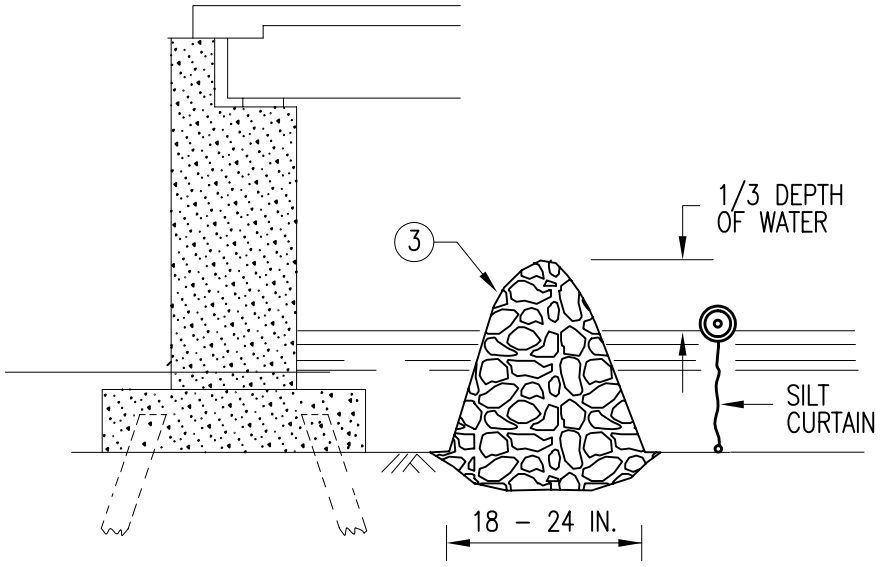
(3) ON U.S. COAST GUARD OR OTHER MOTORIZED WATERWAYS, BUOYS ARE REQUIRED TO MARK THE ENDS AND SPECIAL AREAS FOR VISIBILITY. PLACE BUOYS AS REQUIRED FOR NAVIGATIONAL PURPOSES.

(4) WATER DEPTH CAN BE 0 FEET TO 10 FEET.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

FLOTATION SILT CURTAIN– MOVING WATER

ASST. CITY ENGINEER	DIRECTOR			
SHT 5 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–02	REV. A	



SECTION Z–Z TEMPORARY ROCK BERM

FOR SEDIMENT CONTROL

DESIGN GUIDELINES: MOVING WATER

WHEN TEMPORARY FILL ENCROACHES MORE THAN 1/4 BUT LESS THAN 1/3 WIDTH OF THE STREAM.
MINIMUM WATER DEPTH: 3 FT.
MAXIMUM WATER DEPTH: 11 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC.

(1) (2)

DESIGN GUIDELINES: WORK AREA

WHEN TEMPORARY FILL ENCROACHES LESS THAN 1/4 OF THE WIDTH OF STREAM.
MAXIMUM WATER DEPTH: 10 FT.
MAXIMUM WATER VELOCITY: 5 FT./SEC.

DESIGN GUIDELINES: STILL WATER (2)

MINIMUM WATER DEPTH: 0 FT.
MAXIMUM WATER DEPTH: 10 FT.

NOTES:

SEE SPECS. 2573 & 3887.

(1) CURTAIN EXTENDS TO 1 FT. MAXIMUM FROM BOTTOM OF WATER BODY.

(2) SILT CURTAIN HEIGHTS INCLUDES MAXIMUM WAVE HEIGHT FOR WATER BODY.

(3) IN AREAS WHERE THE PLAN CALLS FOR RIPRAP AT THE BRIDGE, A TEMPORARY ROCK BERM WILL BE USED TO PROVIDE ADDITIONAL PROTECTION. THE TEMPORARY ROCK BERM IS INCIDENTAL FOR WHICH NO DIRECT PAYMENT WILL BE MADE.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

FLOTATION SILT CURTAIN– DESIGN GUIDELINES

ASST. CITY ENGINEER	DIRECTOR			
SHT 6 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–02	REV. A

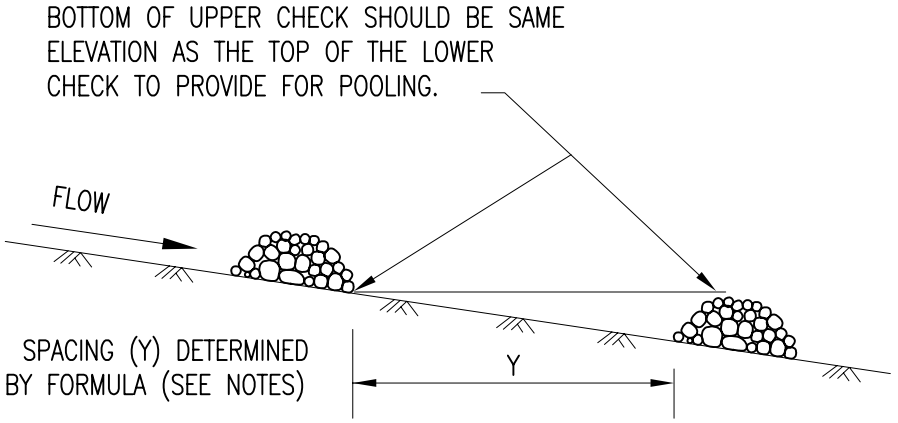
GENERAL DESIGN GUIDELINES						
DITCH CHECK TYPE	SILT FENCE	BIOROLL	BIOROLL BLANKET	TRIANGULAR DIKE	ROCK WEEPER	ROCK CHECK
STORM FREQUENCY:	2 YR. – 24 HR.	2 YR. – 24 HR.	2 YR. – 24 HR.	2 YR. – 24 HR.	5 YR. – 24 HR.	5 YR. – 24 HR.
MAX. FLOW VELOCITY:	----------	----------	----------	----------	12 FT./SEC	12 FT./SEC
MAX. DITCH GRADE:	0% – .5%	1.5% – 3%	1.5% – 3%	1.5% – 2.0%	3% – 5%	3% – 5%
MAX. DRAINAGE AREA:	1 ACRE	2 ACRE	2 ACRE	4 ACRE	4+ ACRE	4+ ACRE

NOTES:

SEE SPECS. 2573, 3601, 3733, 3885, 3886 & 3889.
APPROXIMATE SPACING BETWEEN EACH DITCH CHECK SHOULD BE DETERMINED FROM SPACING FORMULA:

$$(\text{FT.}) = Y = \frac{\text{DITCH CHECK HEIGHT (FT)}}{\text{\% CHANNEL SLOPE}} \times 100$$

(1) PERMANENT DITCH CHECKS PLACED WITHIN THE CLEAR ZONE WILL NEED TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.



DITCH CHECK SPACING (1)

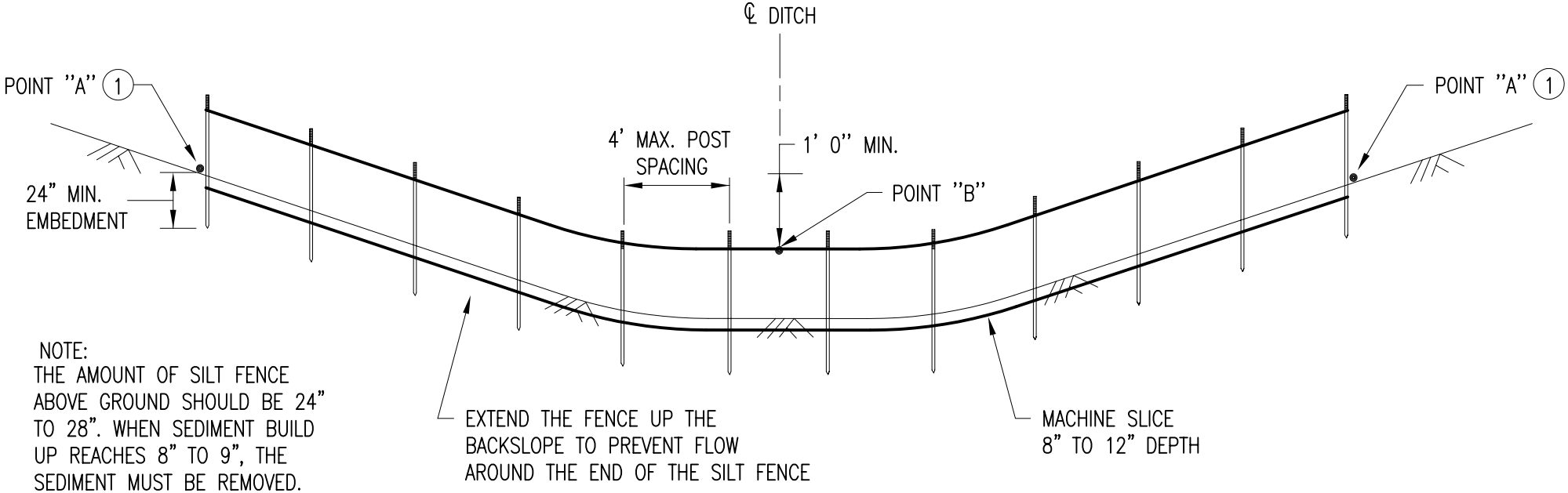
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TEMP. SEDIMENT CONTROL DITCH CHECKS/BARRIERS

ASST. CITY ENGINEER

DIRECTOR

SHT	DATE REVISED	PLATE NO.	REV.
1 OF 6 SHTS	6/15/07	7–03	A



TYPE 1: SLICED IN SILT FENCE DITCH CHECK

NOTES:

SEE SPECS. 2573, 3886 & 3889.

SEE SHEET 1 FOR DITCH CHECK SPACING.

(1) POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

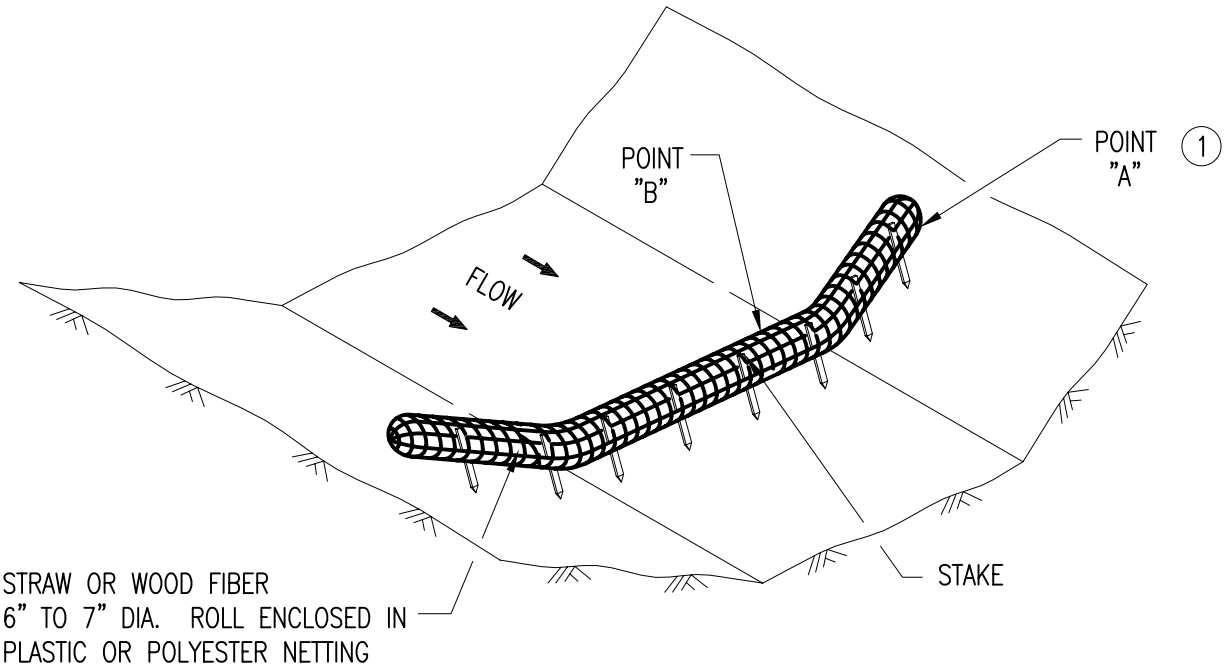
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TEMP. SEDIMENT CONTROL
TYPE 1 DITCH CHECK

ASST. CITY ENGINEER

DIRECTOR

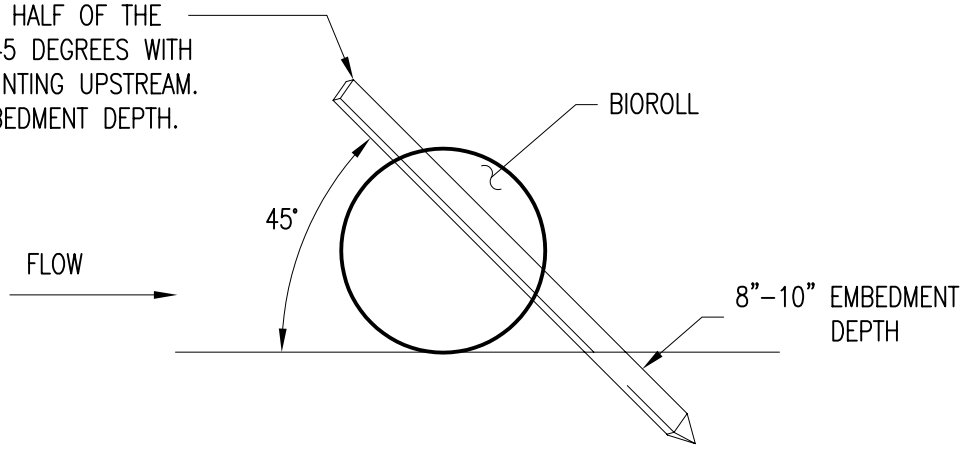
SHT	DATE REVISED	PLATE NO.	REV.
2 OF 6 SHTS	6/15/07	7-03	A



TYPE 2: BIOROLL DITCH CHECK

USE ON ROUGH GRADED AREAS

1" X 2" X 18" LONG WOODEN STAKES AT 1' 0" SPACING MAXIMUM. STAKES SHALL BE DRIVEN THROUGH THE BACK HALF OF THE BIOROLL AT AN ANGLE OF 45 DEGREES WITH THE TOP OF THE STAKE POINTING UPSTREAM. PROVIDE 8" TO 10" OF EMBEDMENT DEPTH.



BIOROLL STAKING DETAIL

NOTES:

SEE SPECS. 2573, 3889.

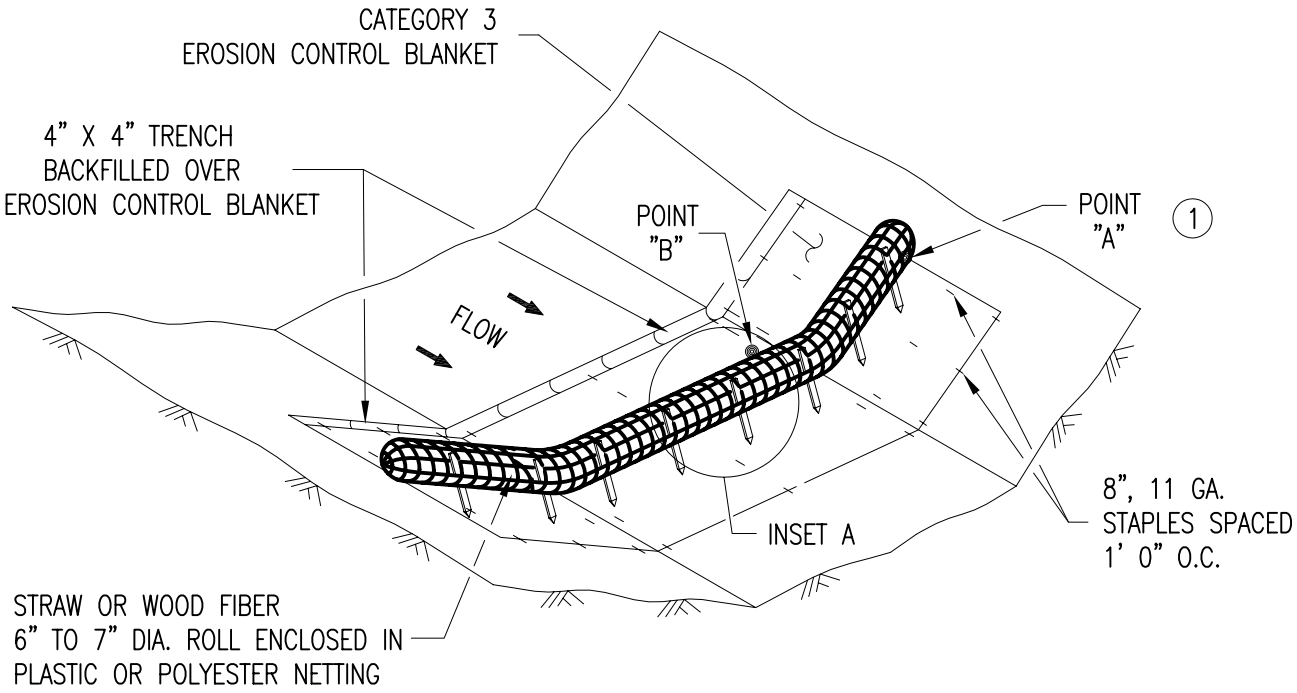
SEE SHEET 1 FOR DITCH CHECK SPACING.

(1) POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

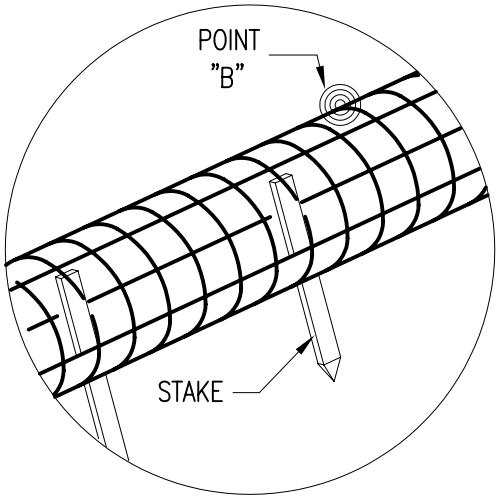
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TEMP. SEDIMENT CONTROL TYPE 2 DITCH CHECKS

ASST. CITY ENGINEER	DIRECTOR			
SHT 3 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–03	REV. A	



TYPE 3: BIOROLL BLANKET SYSTEM DITCH CHECK



INSET A

NOTES:

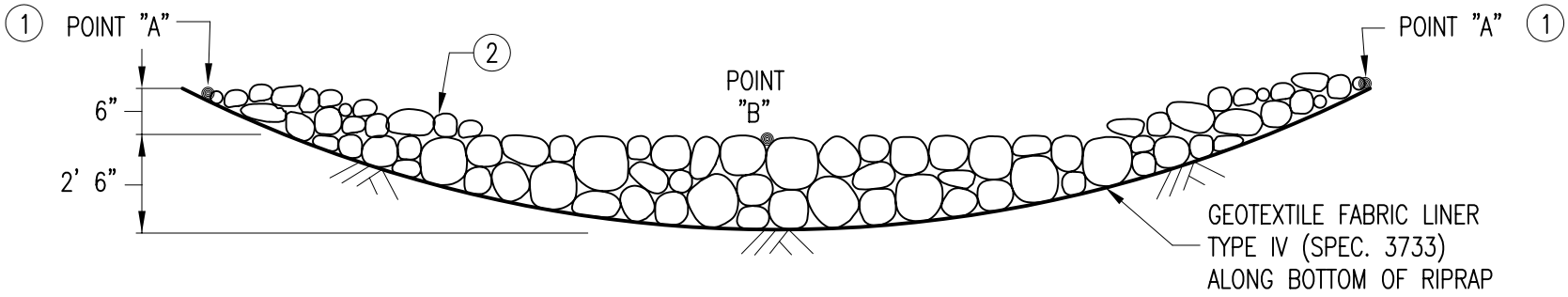
SEE SPECS. 2573, 3733, 3885, 3889.
SEE SHEET 1 FOR DITCH CHECK SPACING.

(1) POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

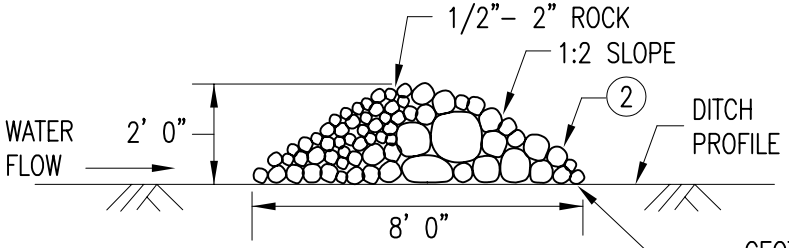
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TEMP. SEDIMENT CONTROL TYPE 3 DITCH CHECK

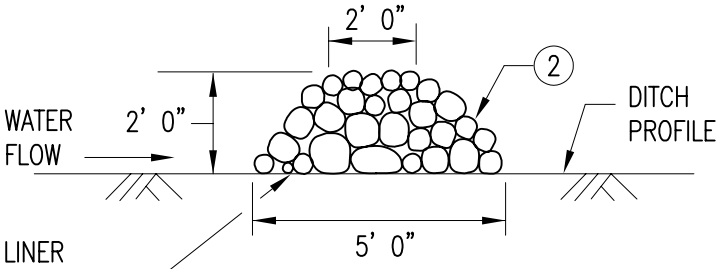
ASST. CITY ENGINEER	DIRECTOR			
SHT 4 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7-03	REV. A	



CROSS SECTION (ROCK WEEPER AND ROCK CHECK)



TYPE 5: ROCK WEEPER PROFILE VIEW (3)



GEOTEXTILE FABRIC LINER
TYPE IV ALONG BOTTOM
OF RIPRAP

TYPE 7: ROCK CHECK PROFILE VIEW

TYPE 5: ROCK WEEPER AND TYPE 7: ROCK CHECK DITCH CHECKS (4)

USE ON ROUGH GRADED AREAS

NOTES:

SEE SPECS. 2573, 3601, 3733, & 3889.
SEE SHEET 1 FOR DITCH CHECK SPACING.

(1) POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

(2) CLASS I – IV RIPRAP (SPEC. 3601) WITH GEOTEXTILE FABRIC LINER, TYPE IV (SPEC. 3733).

(3) THE ROCK WEEPER FILTERS SEDIMENT OUT OF THE WATER BETTER THAN THE OTHER DITCH CHECKS. THE ROCK WEEPER COULD BE USED AS A PERMANENT WATER FILTERING FEATURE.

(4) PERMANENT DITCH CHECKS PLACED WITHIN THE CLEAR ZONE WILL NEED TO BE 18" OR LESS IN HEIGHT. A 1:6 APPROACH AND DEPARTURE SLOPE SHALL BE PROVIDED.

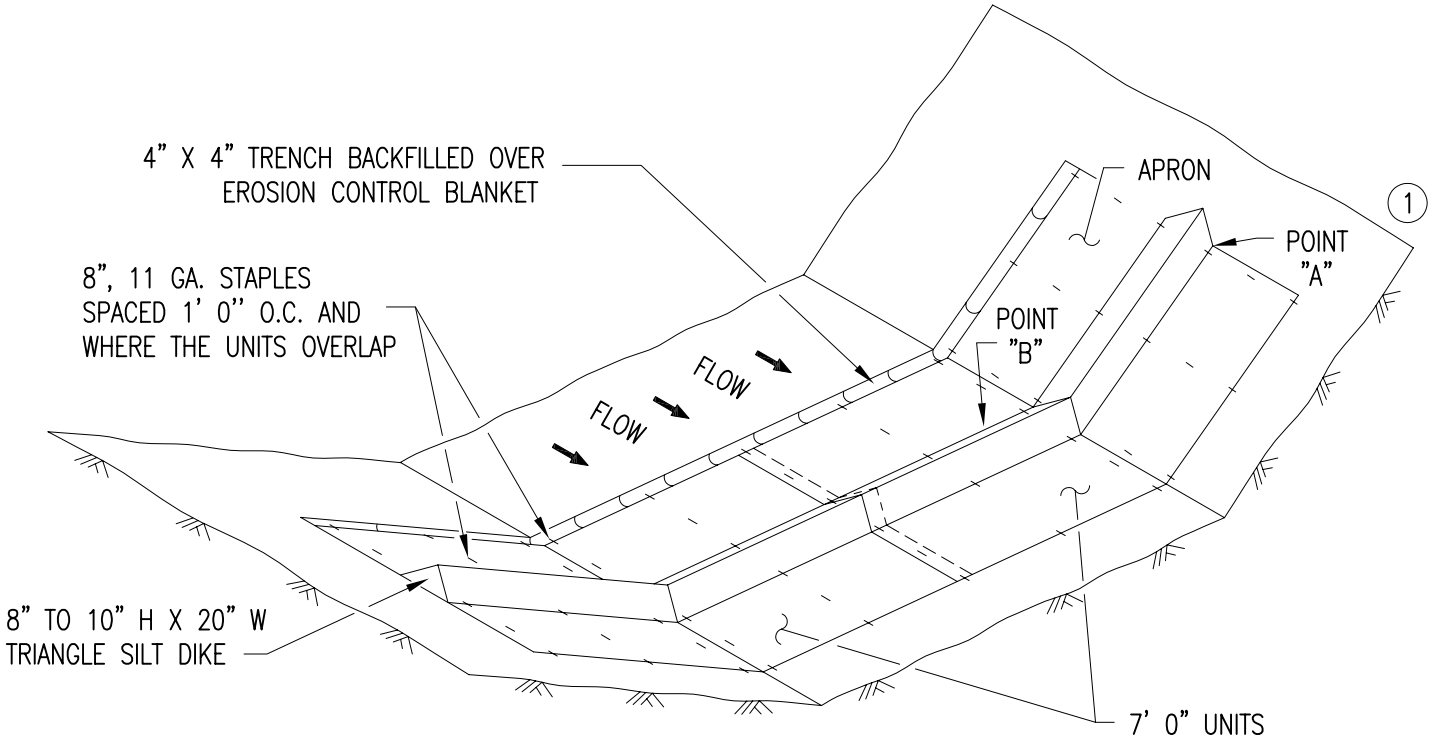
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TEMP. SEDIMENT CONTROL TYPES 5&7 DITCH CHECKS

SHT 5 OF 6 SHTS	DATE REVISED 6/15/07	PLATE NO. 7-03	REV. A

ASST. CITY ENGINEER

DIRECTOR



TYPE 6: GEOTEXTILE TRIANGULAR DIKE DITCH CHECK

NOTES:

SEE SPECS. 2573, 3733, 3885, & 3889.
SEE SHEET 1 FOR DITCH CHECK SPACING.

(1) POINT "A" MUST BE A MINIMUM OF 6 INCHES HIGHER THAN POINT "B" TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS.

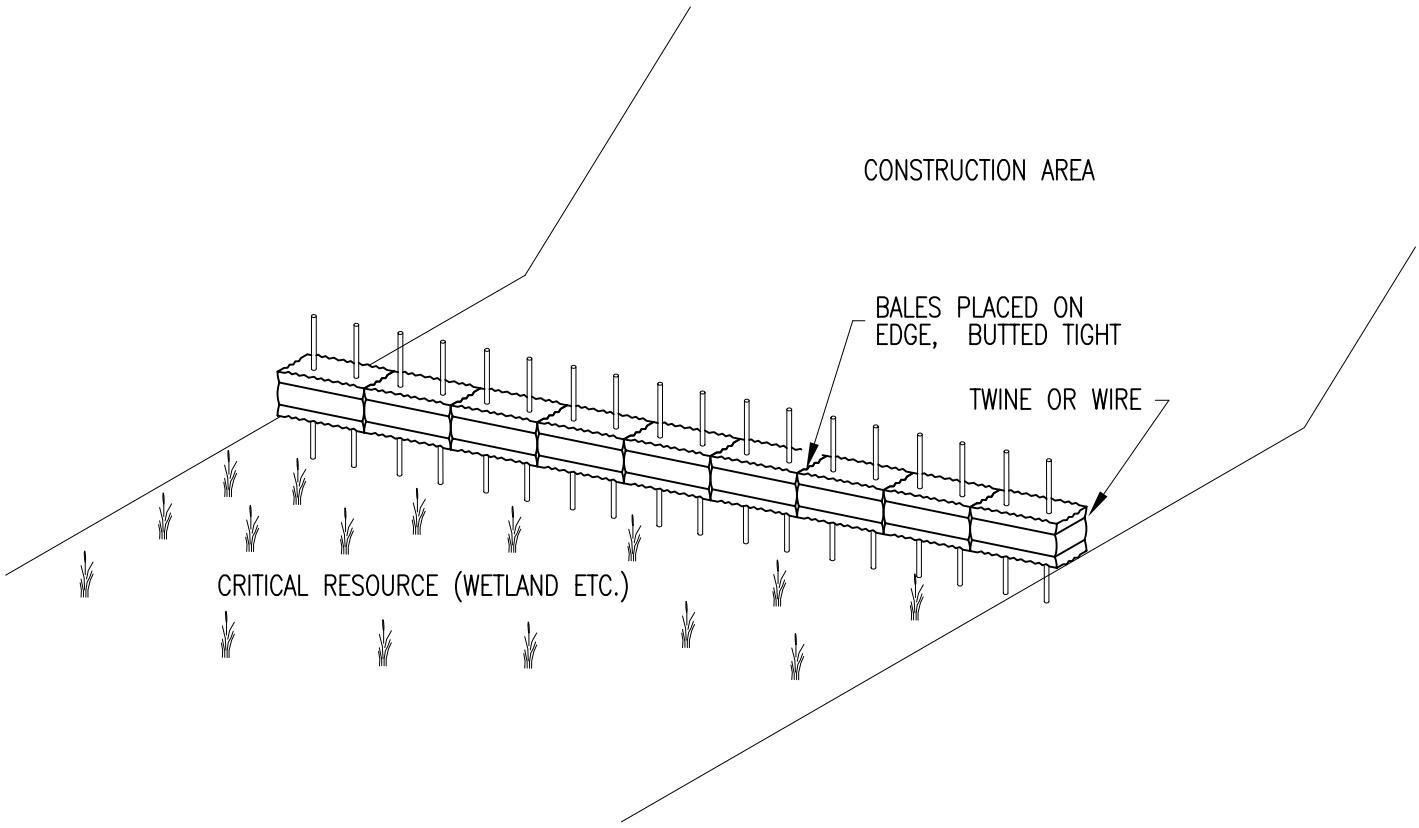
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TEMP. SEDIMENT CONTROL
TYPE 6 DITCH CHECK

ASST. CITY ENGINEER

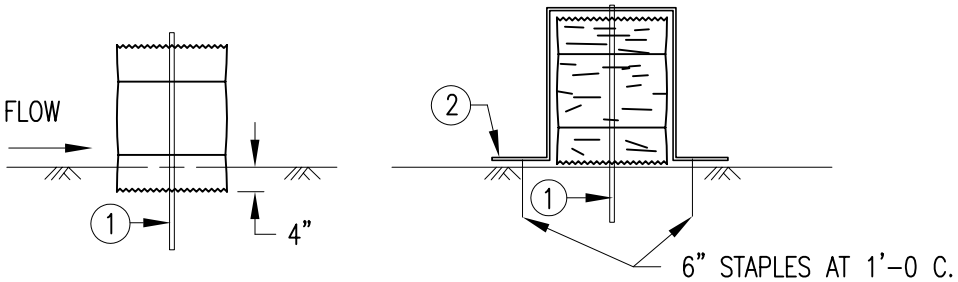
DIRECTOR

SHT	DATE REVISED	PLATE NO.	REV.
6 OF 6 SHTS	6/15/07	7-03	A



BALE BARRIERS

TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS



BALE BARRIER DETAIL

APPROX. BALE SIZE: 14" X 18" X 36" LONG

NOTES:

SEE SPECS. 2573

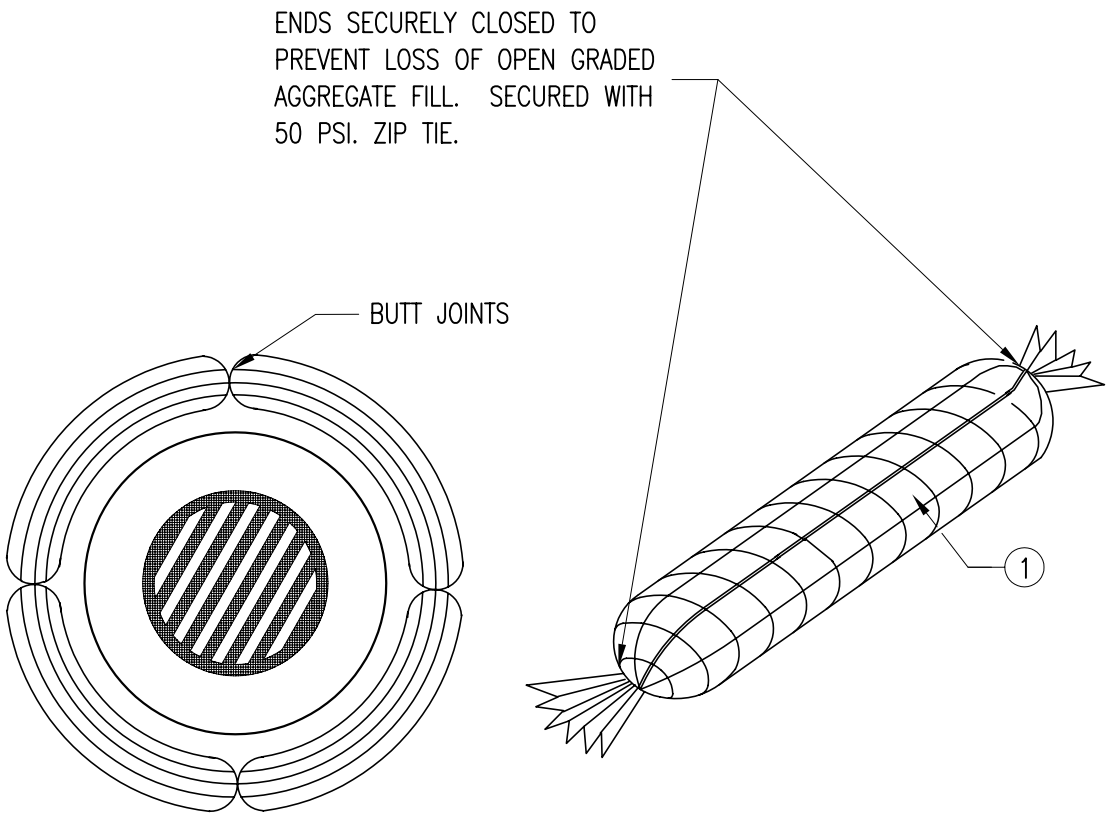
(1) TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE EMBEDDED 10 INCHES MINIMUM IN THE GROUND.

(2) PLACE A CATEGORY 3 EROSION CONTROL BLANKET, 6 FT. WIDE MINIMUM, OVER THE BALE INSTEAD OF TRENCHING.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

BALE BARRIERS

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 7-04	REV. A	



NOTES:

SEE SPECS. 2573 & 3891.

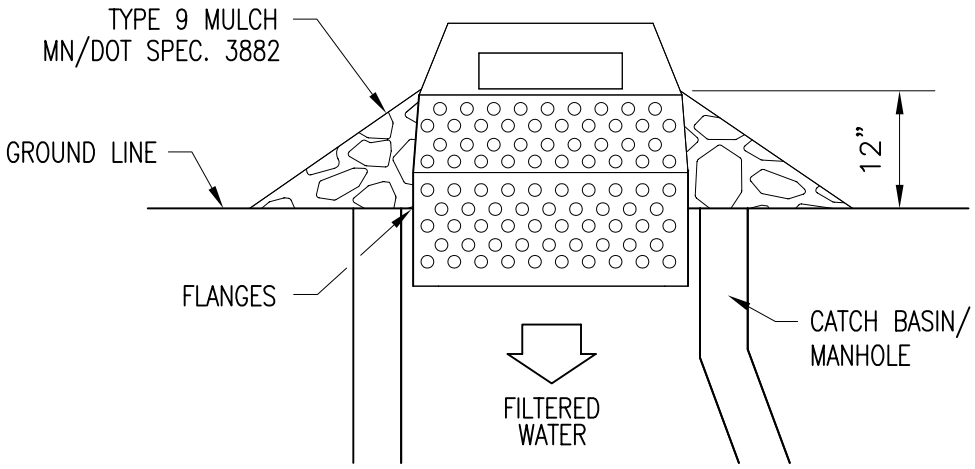
MANUFACTURED ALTERNATIVES LISTED ON Mn/DOT'S APPROVED PRODUCTS LIST MAY BE SUBSTITUTED.

(1) GEOTEXTILE SOCK BETWEEN 4–10 FT. LONG AND 4–6 INCH DIAMETER . SEAM JOINED BY TWO ROWS OF STITCHING WITH A PLASTIC MESH BACKING OR HEAT BONDED (OR APPROVED EQUIVALENT). FILL ROCK LOG WITH OPEN GRADED AGGREGATE CONSISTING OF SOUND DURABLE PARTICLES OF COARSE AGGREGATE CONFORMING TO SPEC. 3137 TABLE 3137–1; CA–3 GRADUATION.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

INLET PROTECTION– ROCK LOG

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 5 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–05	REV. A



SEDIMENT CONTROL INLET HAT

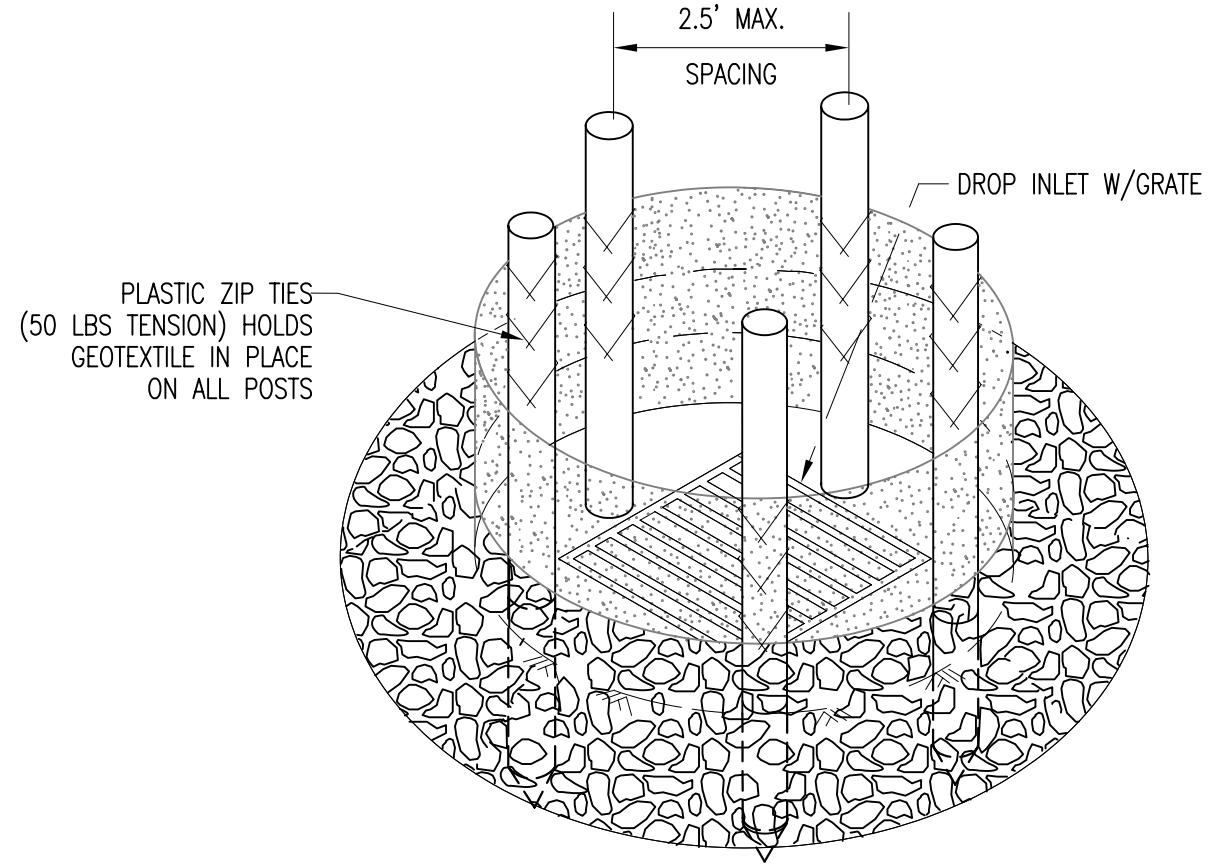
NOTE:
THE SEDIMENT CONTROL BARRIER SHALL BE A METAL OR PLASTIC/POLYETHYLENE RISER SIZED TO FIT INSIDE THE CATCH BASIN/MANHOLE; HAVE PERFORATIONS TO ALLOW FOR WATER INFILTRATION; HAVE AN OVERFLOW OPENING, FLANGES AND A LID/COVER.

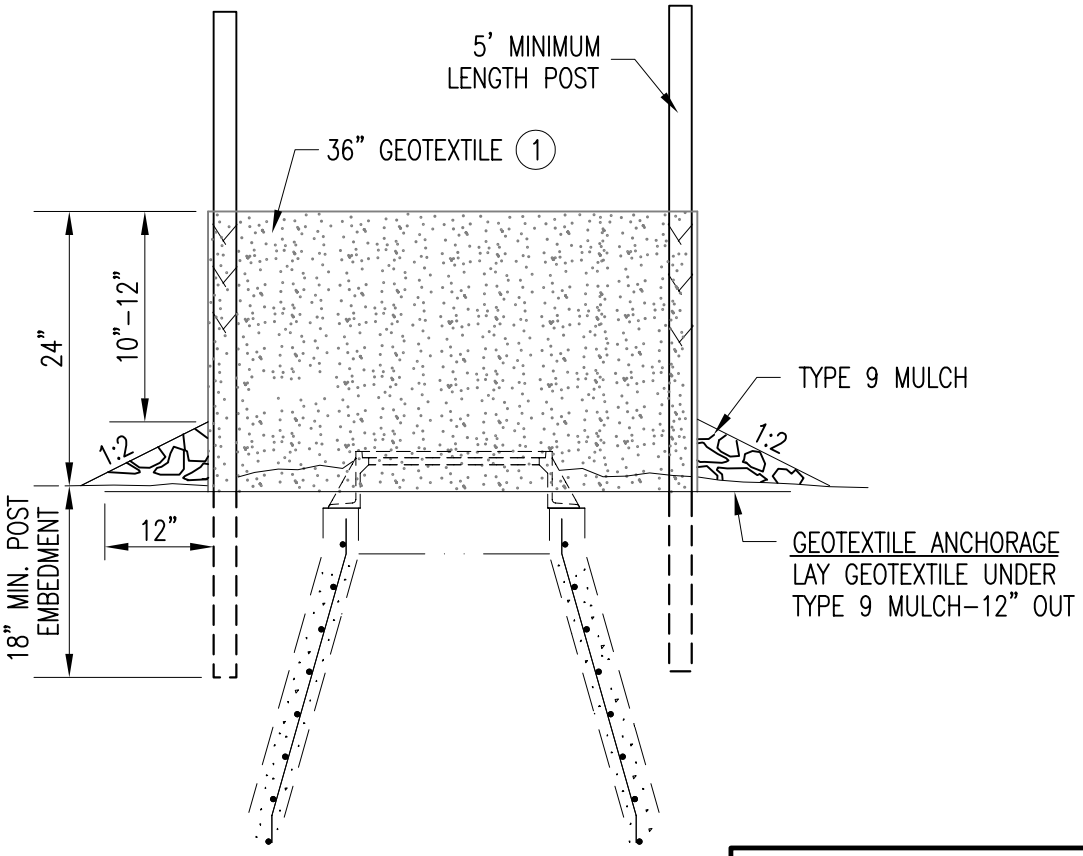
MN/DOT SPEC. 3891

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

INLET PROTECTION– SEDIMENT CONTROL INLET HAT

ASST. CITY ENGINEER	DIRECTOR			
SHT 2 OF 5 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–05	REV. C	





(1) ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING MN/DOT SPEC. 3886 FOR MACHINE SLICED.

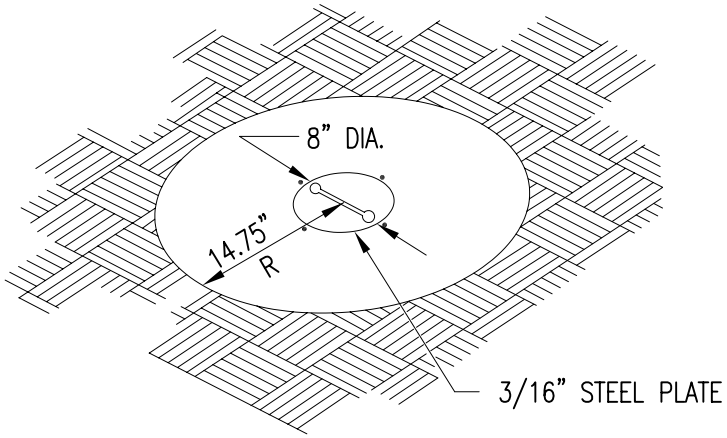
2. USE WHERE INLET DRAINS AN AREA WITH SLOPES AT 1:3 OR LESS. MN/DOT SPEC. 3891-TYPE A

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

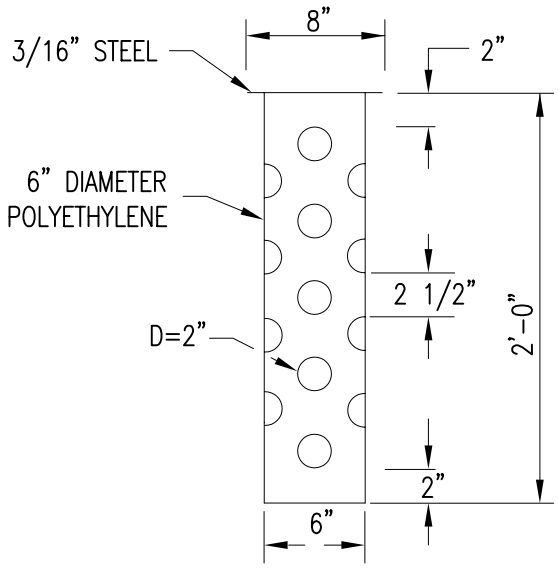
INLET PROTECTION-SILT FENCE RING

ASST. CITY ENGINEER | DIRECTOR

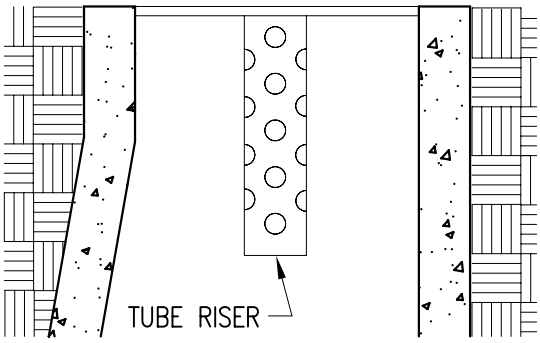
SHT 3 OF 5 SHTS	DATE REVISED 6/15/07	PLATE NO. 7-05	REV. C



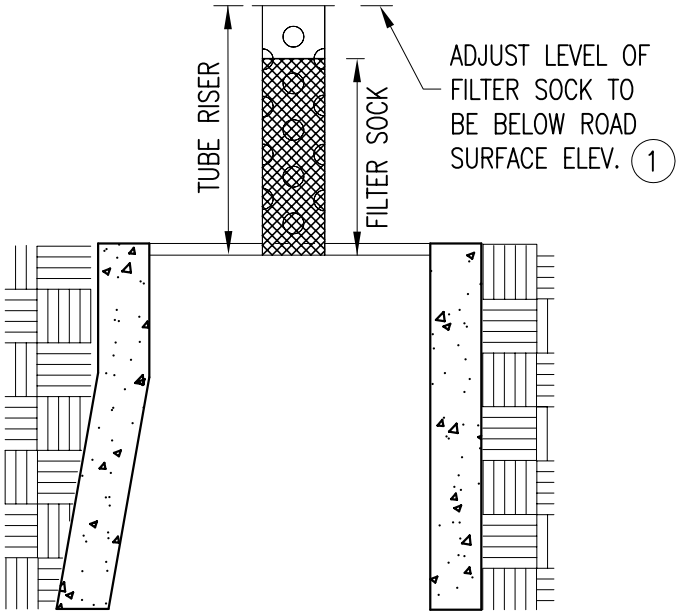
PERSPECTIVE VIEW



TUBE RISER



SECTION
(DOWN POSITION)



SECTION
(UP POSITION)

NOTES:

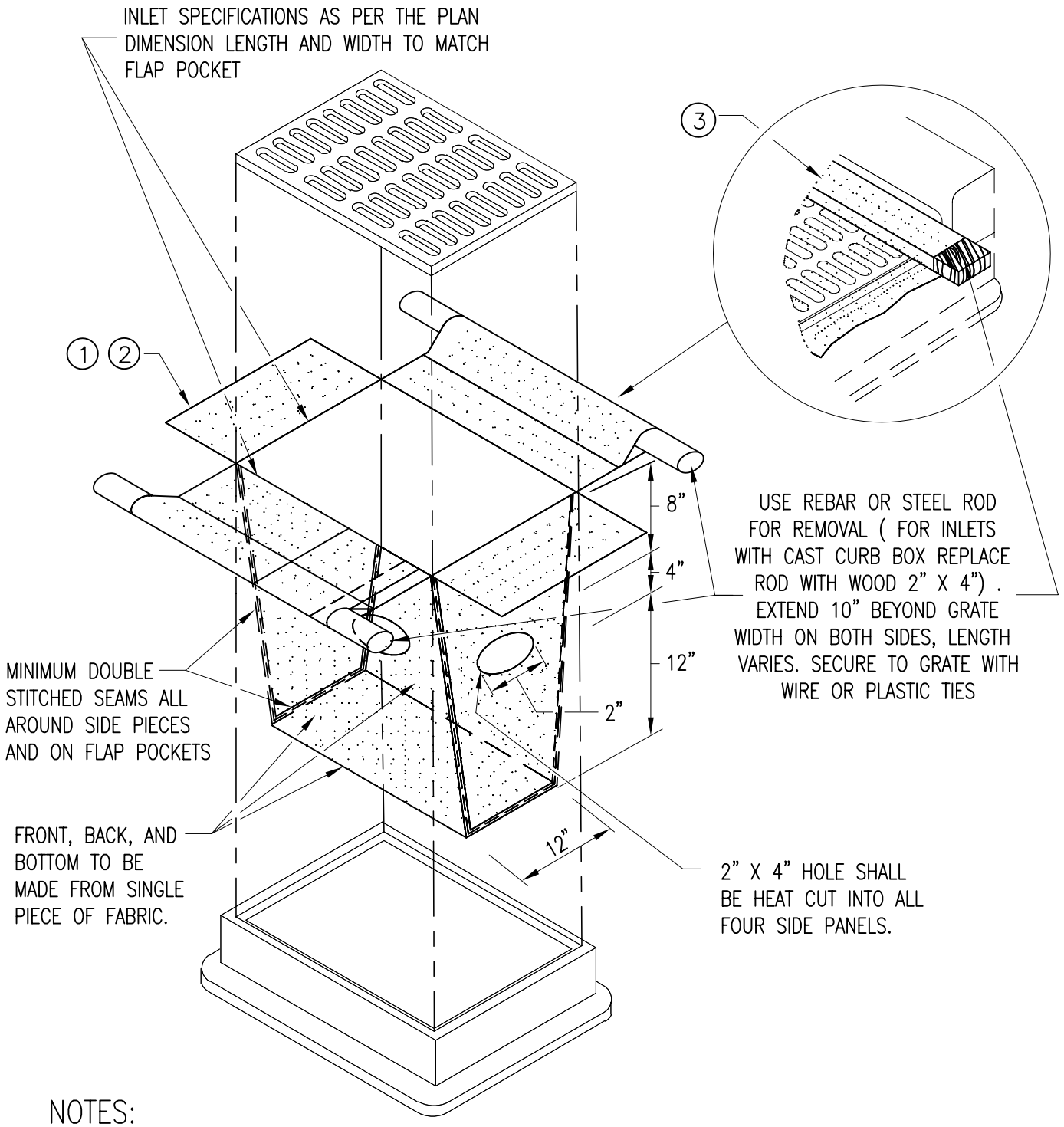
SEE SPECS. 2573 & 3891.

(1) SOCK HEIGHT MUST NOT BE SO HIGH AS TO SLOW DOWN WATER FILTRATION AND FLOOD ROAD.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

INLET PROTECTION– POP–UP HEAD

ASST. CITY ENGINEER	DIRECTOR			
SHT 4 OF 5 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–05	REV. A	



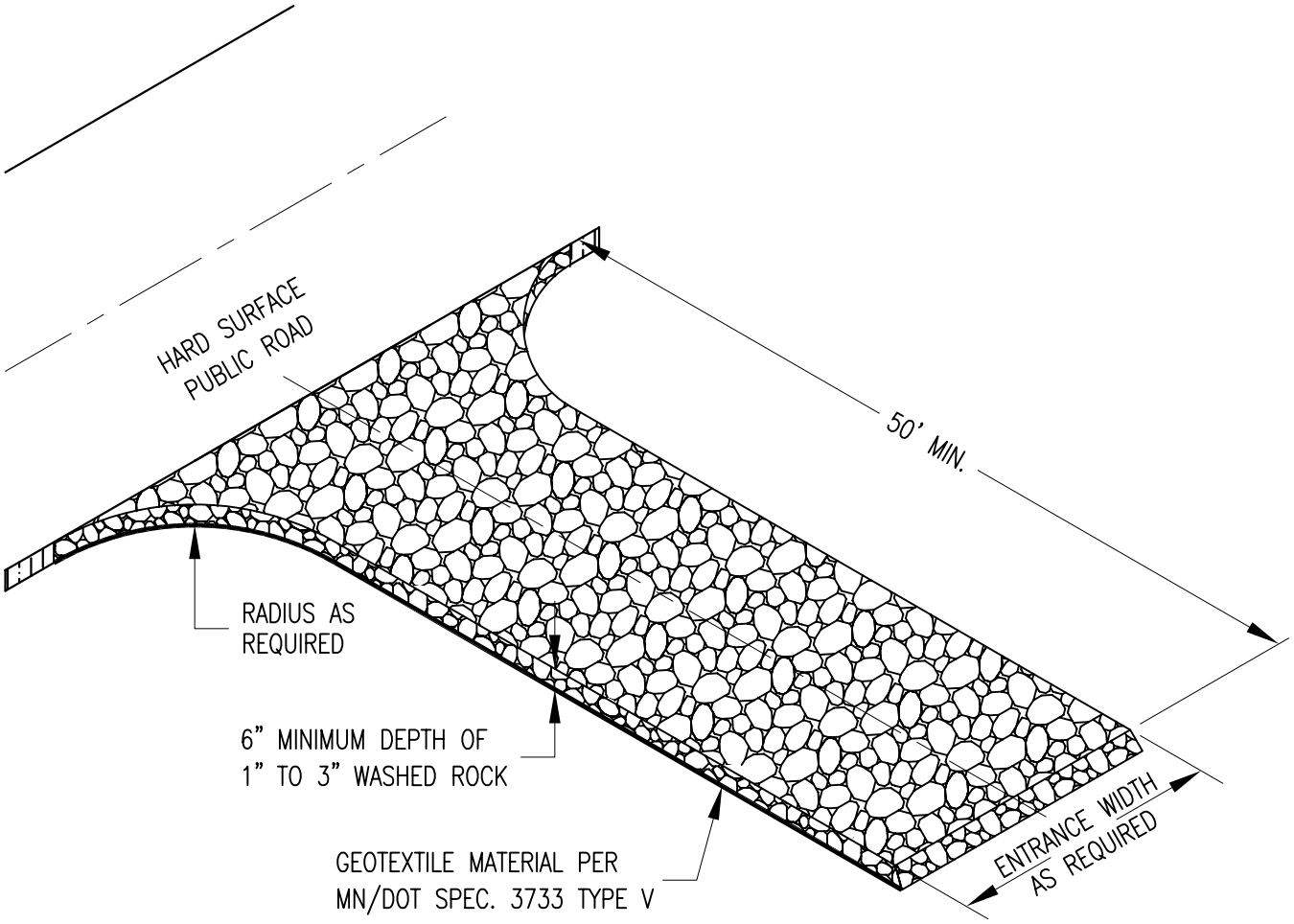
NOTES:

1. ALL GEOTEXTILE USED FOR INLET PROTECTION SHALL BE MONOFILAMENT IN BOTH DIRECTIONS, MEETING SPEC. 3886.
2. FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED SHALL EXTEND A MINIMUM OF 10 INCHES AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
3. FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2 IN. X 4 INCH OR USE A ROCK SOCK OR SAND BAGS IN PLACE OF THE ROCK SOCK AND WOOD 2 IN. x 4 INCH.
4. INSTALLATION NOTES: DO NOT INSTALL FILTER BAG INSERT IN INLETS SHALLOWER THAN 30 IN., MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE. THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE OF 3" BETWEEN THE INLET WALLS AND THE BAG MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES. WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" SIDE CLEARANCE.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

INLET PROTECTION– FILTER BAG INSERT

ASST. CITY ENGINEER	DIRECTOR			
SHT 5 OF 5 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–05	REV. C	



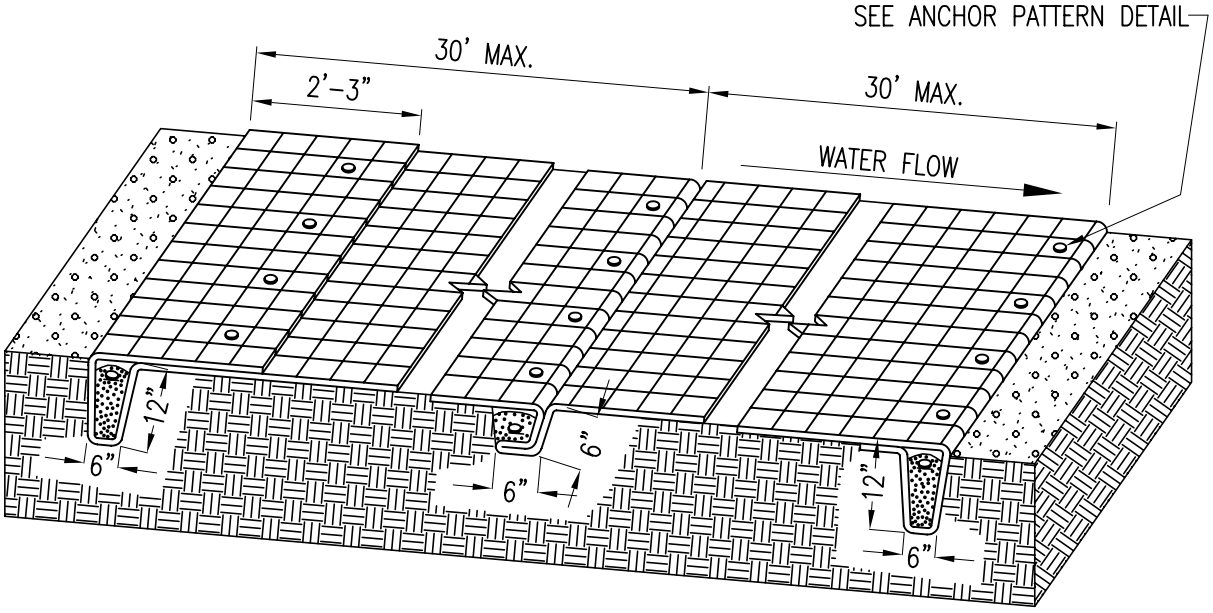
MAINTENANCE (INCIDENTAL)

THE ROCK PAD SHALL BE MAINTAINED TO PREVENT THE TRACKING OF MUD ONTO PAVED ROADS, INCLUDING PERIODIC TOP DRESSING WITH ADDITIONAL ROCK OR REMOVAL AND REINSTALLATION OF THE PAD AS NECESSARY.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TEMPORARY ROCK CONSTRUCTION ENTRANCE

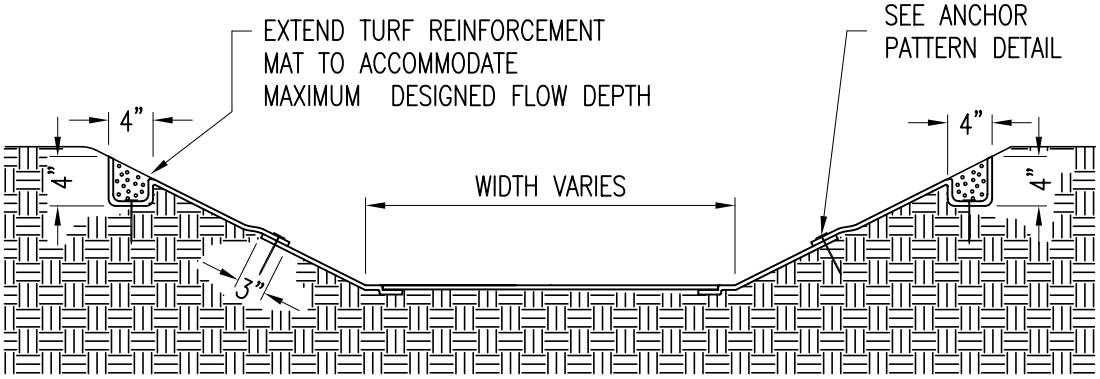
ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 3/22/06	PLATE NO. 7-06	REV. D	



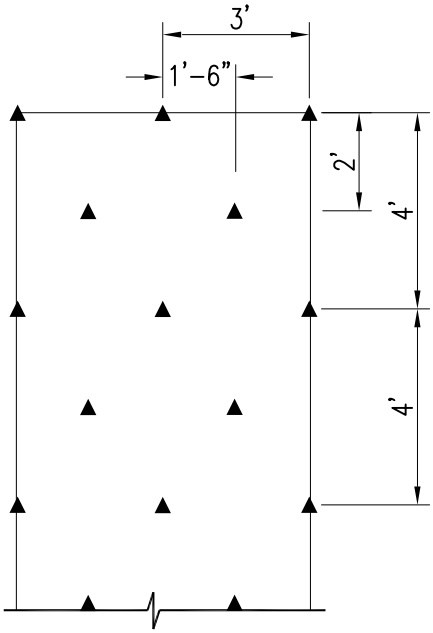
TERMINAL CHANNEL ANCHOR TRENCH

INTERMITTENT CHECK SLOT

INITIAL CHANNEL ANCHOR TRENCH

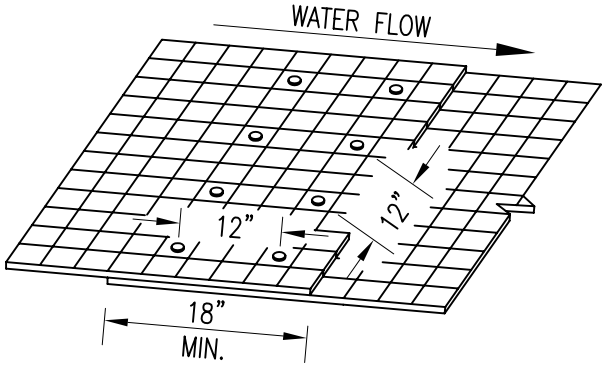


TYPICAL CHANNEL LAYOUT



ANCHOR PATTERN

PATTERN AS SHOWN OR PER MANUFACTURER REQUIREMENTS, WHICHEVER IS MORE STRINGENT.

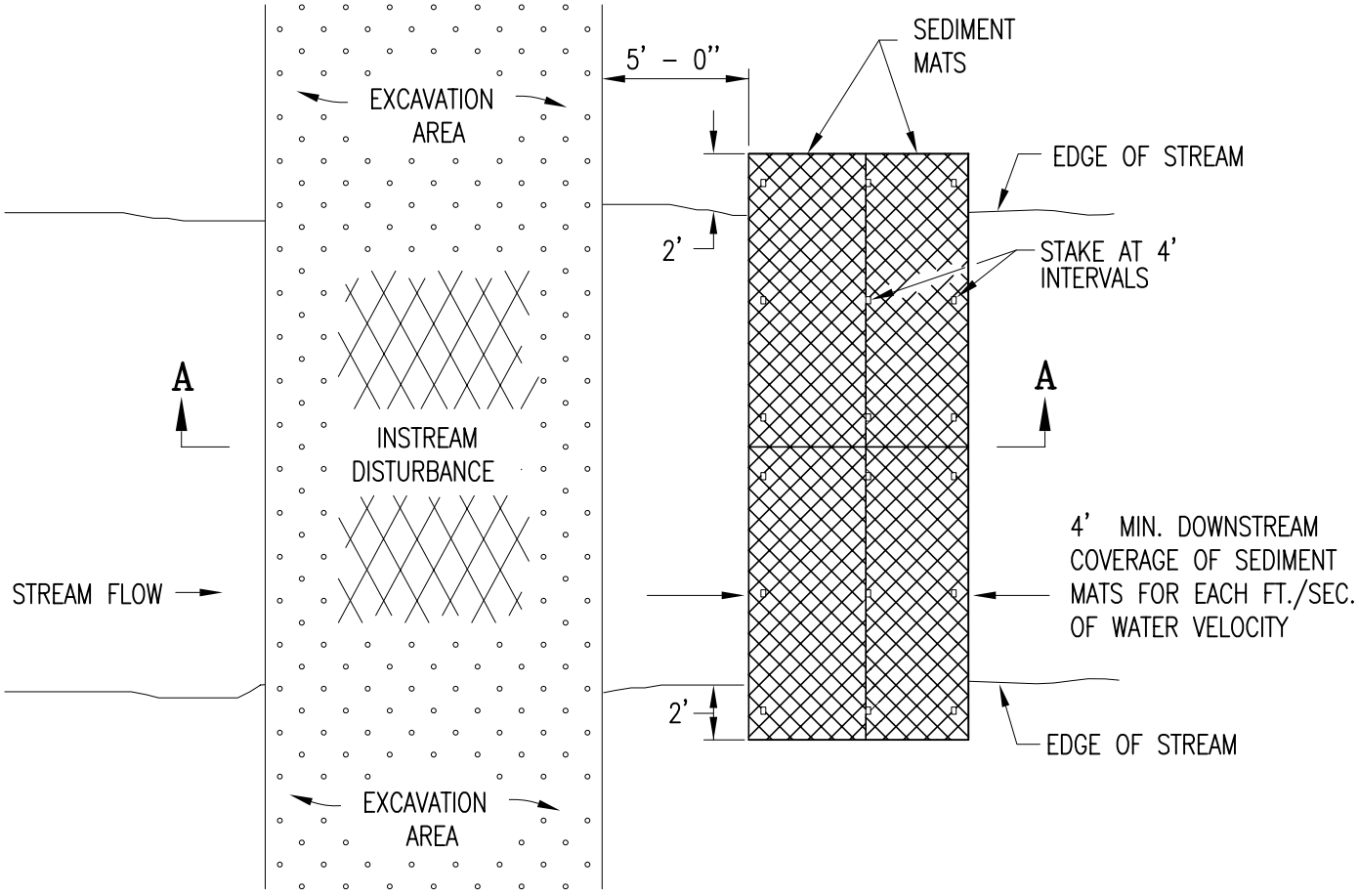


ANCHOR PATTERN AT LAP JOINTS

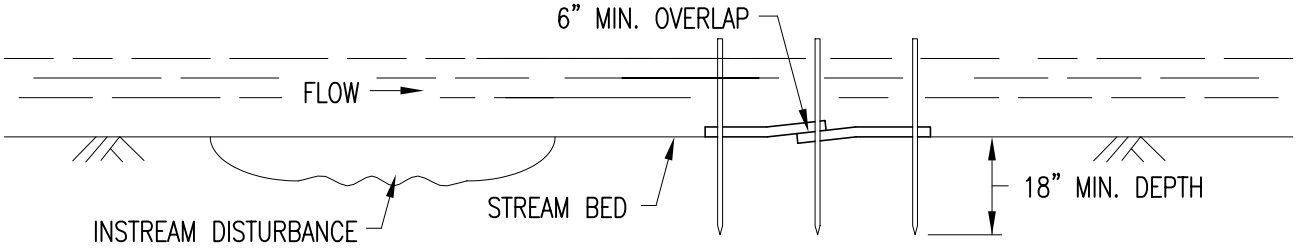
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

TURF REINFORCEMENT MAT FOR CHANNELS

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 4/16/01	PLATE NO. 7-07	REV. A	



PLAN VIEW



SECTION A–A

DESIGN GUIDELINES:

MAXIMUM FLOW VELOCITY: 5 FT./SEC.
MAXIMUM FLOW DEPTH: 2 FT.

NOTES:

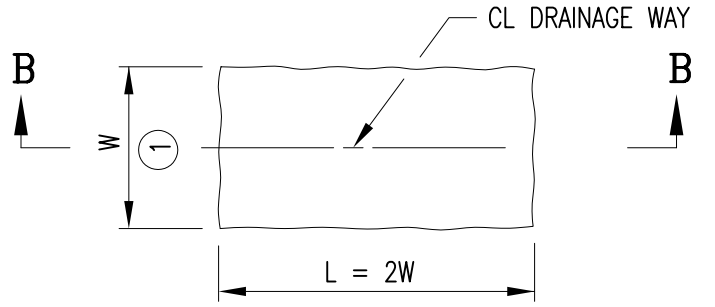
SEE SPECS. 2573, & 3894.

(1) THIS DETAIL MAY NOT BE ACCEPTABLE FOR WORK ON PUBLIC WATERS, SEE GENERAL PUBLIC WATERS PERMIT (GP) 2004–0001.

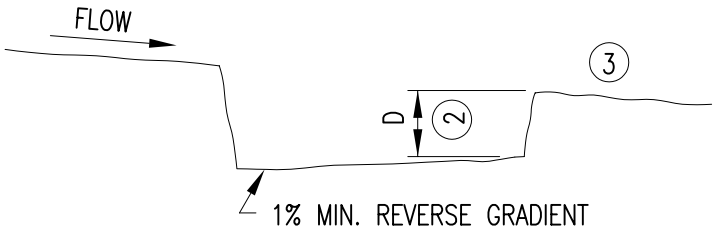
DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

SEDIMENT MAT

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–08	REV. A	



PLAN



SECTION B–B

NOTES:

SEE SPECS. 2573

(1) W = 10 FT. MIN., 20 FT. MAX.

(2) D = 2 FT.

(3) LOCATION OF DOWNSTREAM TEMPORARY SEDIMENT CONTROL DEVICE.

DEPARTMENT OF PUBLIC WORKS
CITY OF ROCHESTER, MINNESOTA

SEDIMENT TRAP DETAIL

ASST. CITY ENGINEER	DIRECTOR			
SHT 1 OF 1 SHTS	DATE REVISED 6/15/07	PLATE NO. 7–09	REV. A	